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SALMONELLA TYPHIMURIUM IN YOUNG ELEPHANTS AND CHIMPANZEES

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Since 1945 12 orphan elephants have been sent to the zoos, including the Zoological Gardens of Ceylon. All were under six months old, and in spite of all the ingenuity and care that human resources could command, only four survived our well-meaning efforts, including two with us at Dehiwela—Chandru, now a handsome young tusker, and the young female Baby Nona.

In each case the animal was between 3 feet and 3 feet 6 inches high, under six months of age, and weighed between 200 and 300 lb. They were without exception in bad condition but some were more emaciated than others. The tendency seems to be to capture the animal only when it is in the last stage of exhaustion and on the verge of collapse.

It might be asked how they became orphans, and the answer is simple. In the majority of cases the mother is shot by some miscreant posing as a sportsman, the herd stampedes and the baby is left to starve to death. Sometimes it will join another herd of elephants or keep wandering about with a drove of wild buffaloes until it drops from fatigue and starvation. The increase in the number of orphans is due to the fact that with the large-scale clearing of forests, elephants are more and more encroaching on cultivation and being shot.

The four animals named above as having survived were brought in in better condition than usually is the case and very shortly after capture. All were four to six months old and about 3 feet in height. Their weights varied between 200 and 300 lb. None of them was old enough to partake of solid food and all had to be bottle-fed. The business of getting a little orphan baby on food is very tricky and needs much patience and ingenuity; the quickest method is to use a little harmless deception. Several bottles of prepared milk and a short length of ½ inch garden hose about 2½ feet long are kept in readiness and the services of our best-tempered huge female named Letchimi are requisitioned. The orphan is led up to her and the elephant's teat pressed into its mouth. As soon as it is observed to suck, one end of the rubber hose is inserted into its mouth from the other side, connected to a bottle of milk. By this means the orphan gets accustomed to being bottle-fed. Various milk foods have been tried and the result of our experiments has led to the following diet becoming more or less standardised. The basis is buffalo milk 75 per cent., Robinson's Patent Barley 25 per cent., with the addition of glucose, lactose, vitamins B and C, and lime water. In addition, tomato juice is given; tender shoots of dadap, jak and other edible leaves, dates, raisins and sugar-cane are also offered as well as pieces of apple.

Very little solid food was taken but the animals took their milk feed with avidity: two quart bottles were fed at a time once every three hours till midnight. From midnight till 6 a.m. nothing was given unless the animal woke up (which it sometimes did) and called for food.

A bucket of water in which bael fruit had been boiled was kept before the animal in case it wanted to quench its thirst. The bael fruit has well-known bowel-regulating properties.

The animals were given a bath every morning and provided with fairly large enclosures in which to exercise themselves.

Whenever diarrhoea started it was checked by the administration of ripe bael fruit, or a preserved substitute called Bilva; if purging continued a few drops of tincture of opium in bilva were administered. When diarrhoea persisted and anaemia became pronounced this was treated with liver and iron plastules, but the improvement was slight.

In three of these animals, as soon as scour became pronounced and offensive, a supply of colostrum was given—there was marked improvement but immediate relapses as soon as the supply was interrupted.

The animals generally did well till they had been with us for six weeks and after that decline was rapid. Those which survived for three months in captivity made continual good progress, and except for occasional treatment for worms gave very little trouble.

The following is a brief history of the two most recent babies, Kadira and Rajah.

Kadira.—Received on 21.10.52, locality Buttala, male about five months old, in very poor condition, reported to have been with a herd of buffaloes about two weeks preceding capture. An abscess, obviously caused by rope cuts, was found on one of the back legs. This answered to treatment and healed in a week. This animal was infested with lice, from which it was freed by liberal use of Gammexane. It was fed on the buffalo milk-barley mixture and was also given dates, apples and other items specified earlier. On 18.11.52 slight diarrhoea was noticed which was checked with bilva and bee honey. On the 29th nematode ova were detected but as slight diarrhoea persisted bilva was continued. On 8.12.52 *S. typhimurium* was isolated; severe offensive diarrhoea continued, and on the night of December 12th the animal succumbed. Unfortunately, it was not possible to make a bacteriological examination of the carcase, which was examined by Mr. L. A. P. Brito-Babapulle, Lecturer in Veterinary Anatomy, University of Ceylon. The cause of death was a haemorrhagic gastro-enteritis.

Rajah.—Received on 25.11.52 from Mullaitivu, where it had been found wandering about on the sea beach; male, six months old, in better condition than Kadira and from the structure of the face it appeared to be a potential tusker. It received the same treatment as was given to Kadira, and as the animal was co-operating fully it appeared to have a really good chance of survival. Faeces were examined on 29.11.52 and nematode ova detected. Answered to treatment with tetrachlorethlyene and bilva; after that the animal was in reasonably good condition. On 12.12.52 somewhat severe diarrhoea started and was checked only after the administration of a few drops of opium in bilva. Bael fruit was continued till loose motions ceased. Diarrhoea started again on 27.12.52 and was reduced

by administration of bilva and bee honey. Faeces, examined at short intervals, indicated no pathogens until 5.1.53, when *S. typhimurium* was reported. On 3.1.53 an offer of Rs 500/- was received from the Incumbent of the Nilamahhara Temple, an Ayurvedic physician of repute, who was sure he would be able to rear the animal. While negotiations for the sale were going on with the priest, *S. typhimurium* was isolated and arrangements for treatment with chloromycetin were being made, but this was not carried out as on 10.1.53 the animal was sold to the Buddhist priest, who was anxious to take it away although he was told of the infection. He wished to try ayurvedic (native Indian treatment by special plants and drugs) and was hopeful of being able to cure and rear it. The animal died, however, on 1.2.53 and *post-mortem* examination was not possible.

Bacteriological examination of the faeces from the elephant calves, the near-by caged chimpanzees and the staff of the Zoological Gardens was made at the Medical Research Institute, Colombo, by E. E. S., and all staff in contact with the baby elephants and chimpanzees were found free from pathogenic bacteria. The finding of *S. typhimurium* in two young elephants (Kauffmann, 1952) and two young chimpanzees would appear, after a perusal of the literature, to be the first record of Salmonella infection in these animals.

Discussion

1. *The Source of Infection.*—The water supply at the Zoological Gardens is from a surface well and a pond. Both have been shown to be faecally polluted, presumably from earth closets used by the public. As the attendants and others in immediate contact with the young elephants and chimpanzees have been found free of infection with Salmonella and Shigella organisms, it is reasonable to presume that the common source of infection was the water supply. As a precautionary measure, this water is now chlorinated.

2. *The Significance of the Presence of* S. typhimurium *in the Young Elephants.*—This is debatable, as we were unable to carry out agglutination tests or to make *post-mortem* bacteriological examinations in the two cases recorded. In a previous case cultures of the faeces and of various organs at autopsy had not revealed any Salmonella infection and the impression had been gained that the diarrhoeic condition seen in orphan baby elephants was similar to that in " calf scours " ; that is, the baby elephant had not received sufficient colostrum before being deprived of its mother or abandoned by her. It is known that elephant calves suckle for four to five years and it may well be that colostrum antibodies are secreted by the elephant mammary gland for a considerable portion of that period. However, this is mere speculation as there is very little information on the secretion and composition of elephant's milk. Anselmi & Calò (1949) reviewed the scanty literature and pointed out the difficulties involved in estimating the average composition. Following the birth of an elephant calf in the Rome Zoological Gardens, they were able to obtain seven samples of milk from the mother, which refused to feed the calf. Anselmi & Calò analysed the samples obtained and decided that the addition of 63 grammes of cream and of 10 grammes of lactose to each litre of cow's milk formed an adequate substitute for elephant milk. The composition of this mixture was fat 6·60 per cent., protein 3·20 per cent., lactose 5·45 per cent., ash 0·71 per cent., lime 0·117 per cent. As Makuze (1939) had shown that elephant milk contains large amounts of vitamins B_1, B_2 and C, it was decided to feed 1 litre of tomato juice every day. On this diet (amounts not stated) the young elephant in Rome Zoo thrived.

The buffalo milk-barley water lactose mixture used in Ceylon Zoological Gardens is very similar to the milk mixture used in Rome and should be quite adequate ; however, it must be noted that the orphans in Ceylon usually have been starving for days and even weeks before being captured and are in a poor state of health when received. The ideal diet might prove to be cow or buffalo colostrum suitably diluted and reinforced with extra supply of vitamins B_1, B_2 and C.

3. *The Significance of* Shigellae *and* S. typhimurium *in the Young Chimpanzees.*—This is less doubtful. These young animals (approximately two years of age) had been in fair health prior to December, 1952, despite the fact that three were infected with nematodes and in the case of one, Goody, with *Entamoeba histolytica* also. This animal became very ill with diarrhoea and anaemia about 1.12.52 ; one of the authors (C. A. McG.) was consulted by telephone, and on his advice dihydrostreptomycin, 0·5 gramme *per os b.i.d.*, was administered. There was a dramatic improvement and supporting treatment with iron plastules, Panopeptone, etc., was continued. Meanwhile bacteriological examination of the faeces had been made and *Sh. flexneri* 4 isolated. The animal apparently was recovering when quite suddenly, on 1.1.53, it became acutely ill, exhibiting signs of a much more severe disease and dying on 7.1.53. Bacteriological examination of the faeces revealed the presence of *S. typhimurium* on 3.1.53, but unfortunately a bacteriological *post-mortem* examination was not possible ; the lesions found by Mr. L. A. P. Brito-Babapulle on autopsy were those of acute gastro-enteritis.

In the other two young chimpanzees, *Sh. flexneri* 6 had been detected earlier in the faeces and on 7.1.53 *S. typhimurium* was found in one animal (Grumpy). Signs of dysentery appeared and therefore sulphaguanadine and later chloromycetin were administered with good results. Recovery was slow and it was decided to send the two surviving chimpanzees to the Veterinary Hospital, Peradeniya, where they could be under the immediate supervision of C. A. McG. No pathogenic bacteria were found on later examination of the faeces, but there was heavy infestation with *Strongyloides* sp., *Oxyuris* and *Trichuris*. The treatment of this infection is the subject of another communication.

Shigella bacteria (" dysentery bacilli ") have been recorded in primates previously (Lovell, 1929 ; Verder & Petran, 1937 ; Janota & Dack, 1939 ; Preston & Clark, 1938 ; David & Schirl, 1939). It is interesting that in this outbreak, two different types, *Sh. flexneri* 4 and *Sh. flexneri* 6, were found in each of two cage mates, thus suggesting infection from water faecally polluted by a number of human carriers. *Sh. flexneri* 4 has been isolated also from a Guinea baboon.

Summary

1. *S. typhimurium* was isolated from the faeces of two baby elephants suffering from diarrhoea, which proved fatal.

2. *S. typhimurium* also was isolated from the faeces of two young chimpanzees caged near the elephants. These animals had been found earlier to be infected with *Sh. flexneri* 4 and 6.

3. The source of infection probably was the water supply, known to be polluted by human excreta.

4. The significance of the presence of *S. typhimurium* in the bowels of the elephants and chimpanzees is discussed.

References

Anselmi, S., & Calò, A. (1949). *Ann. Chim. Appl. Roma.* **39**. 100-108.

Benedict, F. G. (1936). The Physiology of the Elephant. Carnegie Institute of Washington.

David, H., & Schirl, A. (1939). *Zbl. Bakt.* **144**. 43. Quoted by Wilson & Miles.

THE ROYAL SOCIETY OF MEDICINE

(Section of Comparative Medicine)

[Contributed]

It was a little over 30 years ago that the Council of the Royal Society of Medicine referred the question of creating a section of Comparative Medicine to its Finance and General Purposes Committee. The report of this committee was approved at a meeting of the Council held on November 15th, 1921; the resolution was to the effect that "This Committee having considered the question of creating a Section of Comparative Medicine is of the opinion that at present the formation of such a section is inadvisable."

Within two years Professor (later Sir Frederick) Hobday wrote to the Council urging the formation of a Section of Comparative Medicine. In his letter, which was read at a meeting of the Council on March 20th, 1923, it was stated that 61 veterinary surgeons were Fellows of the Society, and that such a section would be a valuable meeting ground where medical men and veterinarians could discuss jointly problems relating to subjects of common interest. A list of subjects, together with suggested essayists, which could be discussed with advantage, was appended to the letter. This list included: "Pyorrhoea in the Dog and other Domesticated Animals," by Henry Gray, M.R.C.V.S.; "The Intestinal Parasites of Animals and Man," by R. Daubney, M.R.C.V.S.; "The Milk Problem," by J. W. Brittlebank, C.M.G., F.R.C.V.S., D.V.S.M.; "The Importance of a Proper System of Meat Inspection," by T. Dunlop Young, O.B.E., F.R.C.V.S., D.V.S.M.; "A Curious Comparison between the Tumour and Abnormalities of the Testis and Ovaries in Human and Veterinary Patients, with specimens and illustrations on the Epidiascope," by F. T. G. Hobday, C.M.G., F.R.C.V.S.; and "The Physiological Temperatures of Animals and Birds and their interesting variations applied to observations in Health and Disease," by F. T. G. Hobday, C.M.G., F.R.C.V.S.

This letter with its appendage persuaded the Council that the question should be considered at its next meeting, and in the meantime Professor Hobday was invited, with 11 supporters, to meet the Council on Tuesday, April 17th, 1923. This was an informal conference and not an ordinary meeting of the Council, and Professor Hobday included among his supporters Major-General Sir Layton Blenkinsop, Mr. W. Hamilton Kirk, Mr. Geoffrey Livesey, Mr. J. W. McIntosh, Major-General Sir John Moore, Major-General W. Dunlop Smith and Professor G. H. Wooldridge. At this meeting the Council passed a resolution "That it is desirable that a Section of Comparative Medicine and Pathology be formed and that the necessary announcement be issued to the Fellows." At the same meeting the Council approved the suggestion that the presidents of the sections should be invited to meet to consider whether something could be done to reduce the number of sections by amalgamation or otherwise.

The President of the Society reported to the Council at its meeting held on May 15th that a formal objection to the formation of the section had been signed by 11 Fellows. It was therefore resolved "That in view of the formal objection to the formation of a Section of Comparative Medicine and Pathology, the next meeting of the Society shall be a Special General Meeting of Fellows at which due notice shall be given announcing opposition to the decision of the Council."

The special meeting was held at the Society's House, 1, Wimpole Street, London, W.1, on June 19th, 1923. The chair was occupied by the President, Sir William Hale-White; Dr. A. M. H. (now Sir Archibald) Gray was present as Honorary Secretary, and among the gathering of 45 Fellows were Sir Frederick Hobday, Sir Humphry Rolleston, Sir Leonard Rogers, Sir William Willcox and Sir John Ledingham. The meeting approved the suggestion of the Council for the creation of the section with the deletion of the word "Pathology." The Section of Comparative Medicine was therefore brought into being in June, 1923, after some difficulties and some opposition which was overcome by the pertinacity of a few.

An organising committee of the new section met on June 29th, 1923, under the chairmanship of the President of the Society, Sir William Hale-White. The Chairman was supported by the Honorary Treasurer, Mr. C. H. Fagge, the Honorary Librarian, Mr. W. G. Spencer, and the Secretary, Sir John MacAlister; Major-General Sir John Moore and Sir Frederick Hobday were also present. It was desirable to organise the section for it to be in the calendar for the ensuing session; accordingly the by-laws and regulations of the Section of Medicine were adopted *pro tem.* for the Section of Comparative Medicine, and it was agreed that the presidents of the section should be chosen alternately from representatives of veterinary medicine and human medicine. At a meeting held on July 6th, 1923, these suggestions were accepted, and it was also agreed that the members of the council of the section and its officers should be selected on a similar basis. The first president of the section for the year 1923-24 was Sir Clifford Allbutt and the vice-presidents representing veterinary medicine included Major-General Sir Layton Blenkinsop, Lieut.-Colonel J. W. Brittlebank, Professor J. B. Buxton, Major-General Sir John Moore and Professor G. H. Wooldridge. The medical vice-presidents were Sir William Hale-White, Lieut.-General Sir William Leishman and Sir Leonard Rogers. The honorary secretaries were Dr. Adrian Stokes and Sir Frederick Hobday. Members of Council included Sir Andrew Balfour, Dr. S. R. Douglas, Professor L. S. Dudgeon, Sir D'Arcy Power, Mr. G. P. Male, Mr. W. Hamilton Kirk, Mr. G. H. Livesey, Mr. J. W. McIntosh and Sir William Wilcox.

During the 30 years the section has held 184 general meetings with average attendances of from 40 to 50. The presidents from 1923 to 1953 are:—

Sir Clifford Allbutt	Dr. C. H. Andrewes, F.R.S.
Sir Frederick Hobday	Mr. G. Dunlop Martin
Sir D'Arcy Power	Sir Alexander Fleming, F.R.S.
Major-General Sir John Moore	Mr. J. T. Edwards
Dr. Stewart R. Douglas, F.R.S.	Dr. H. J. Parish
Professor G. H. Wooldridge	Mr. W. A. Pool
Sir Joseph Arkwright, F.R.S.	Professor G. R. Cameron, F.R.S.
Mr. W. Horner Andrews	Professor R. E. Glover
Professor R. T. Leiper, F.R.S.	Professor Wilson Smith, F.R.S.
Professor J. B. Buxton	Dr. R. Lovell
Sir John Ledingham, F.R.S.	Professor A. Haddow
Major G. W. Dunkin	Dr. A. W. Stableforth
Professor S. P. Bedson, F.R.S.	Professor C. L. Oakley
Sir Thomas Dalling	

A number of eminent men have been elected to honorary membership including Professor E. E. Leclainche, Dr. J. R. Mohler, Dr. R. v. Ostertag, Dr. Peyton Rous, Dr. R. E. Shope, Dr. P. J. du Toit, Mr. A. T. Glenny, Dr. H. W. Bennetts and Mr. H. E. Hornby.

(*Concluded at foot of col. 1, page 434*)

Janota, M., & Dack, G. M. (1939). *J. infect. Dis.* **65**. 219. Quoted by Wilson & Miles.
Kauffmann, F. (1952). Personal communication (to E. E. S.).
Lovell, R. (1929). *Proc. roy. Soc. Med.* **22**. 820.
Makuze. (1939). Quoted by Anselmi & Calò.
Preston, W. S., & Clark, P. F. (1938). *J. infect. Dis.* **63**. 238. Quoted by Wilson & Miles.
Wilson, G. S., & Miles, A. A. (1945). Topley & Wilson's Principles of Bacteriology and Immunology. Third edition. London: Edward Arnold & Co.

PROFESSOR R. E. GLOVER, M.A., B.Sc., F.R.C.V.S.

President of The Royal College of Veterinary Surgeons, 1953-54

The election of Professor R. E. Glover to the Presidency of the Royal College of Veterinary Surgeons will be generally welcomed throughout the profession as well as in the far wider scientific circles in which he is well known. It is a choice which brings to the chair one whose qualities inspire confidence that he will maintain the highest traditions of his office and prove himself well equipped to afford the Council the advice and guidance it needs at a time when important questions of policy regarding its future activities have yet to be decided. He has a full grasp of the duties and responsibilities which devolve upon the Royal College under the Veterinary Surgeons Act, 1948, and has played a very active part during the past few years in the work of several of the committees which have been set up to implement its provisions.

Ronald Everett Glover was born in London on December 25th, 1897, and educated at Emmanuel School. He had a distinguished scholastic career at the Royal Veterinary College, where he obtained the M.R.C.V.S. diploma in July, 1921, and the B.Sc. degree in veterinary science of London University later in the same year. As a Research Scholar of the Ministry of Agriculture he spent some time in Sir John M'Fadyean's laboratory and afterwards transferred to the Laboratoire National de Recherches des Services Vétérinaires, Ministère de l'Agriculture, Alfort, Paris, to work under the direction of the late Professor Henri Vallée. At that time he also held the Jubilee Memorial Scholarship of the Royal College of Veterinary Surgeons and he took advantage of his stay in Paris to attend the course in Bacteriology at the Pasteur Institute.

Returning to this country in the autumn of 1923, he was appointed by the Tuberculosis Committee of the Medical Research Council to assist in investigations on the double intradermal tuberculin test in cattle then in progress at Hampstead. The work was transferred to Cambridge early in 1924 when Mr. Glover joined the staff of the newly formed Institute of Animal Pathology there. He studied the causes of " non-specific " reactions, introduced synthetic medium tuberculin in the place of old tuberculin as one means of reducing the incidence of those reactions and investigated the extent to which their occurrence might be due to sensitisation to organisms other than the bovine tubercle bacillus. With Professor J. B. Buxton and the late Dr. A. Stanley Griffith he was engaged in a series of experiments designed to assess the value and study the practical application of B.C.G. vaccine in the control of bovine tuberculosis. During this time many other diseases claimed his attention and his work on contagious pustular dermatitis of sheep, contagious abortion of ewes, joint-ill of lambs, sheep pneumonia, fowl pox, fowl paralysis, *Cl. welchii* toxin and other subjects is widely known and appreciated.

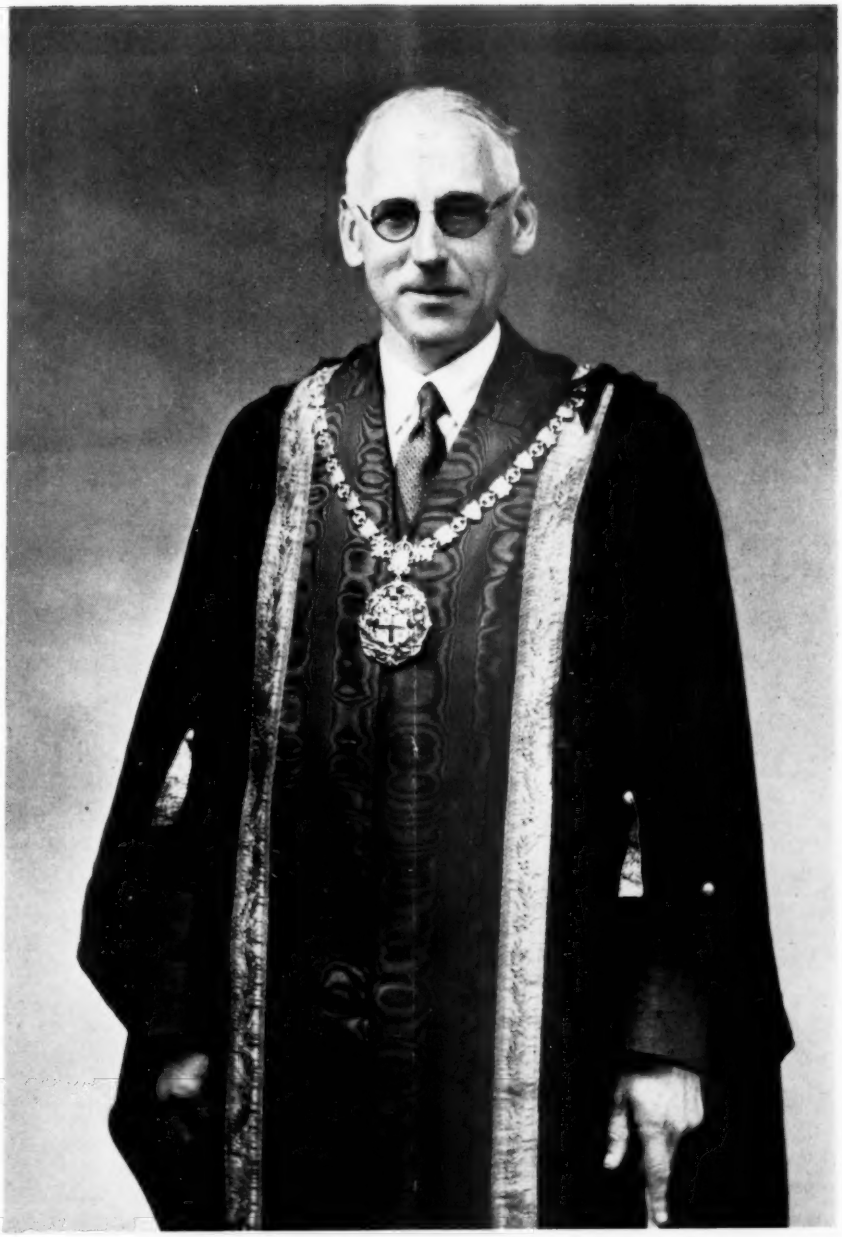
In 1937 he left Cambridge at the invitation of the Medical Research Council to succeed the late Major G. W. Dunkin as Superintendent of the Farm Laboratories of the National Institute for Medical Research at Mill Hill on the latter's appointment to be Director of the Agricultural Research Council's Field Station at Compton. The next 10 years saw Mr. Glover collaborating in work on influenza and other virus diseases of man and animals with various colleagues at the National Institute; particularly Dr. C. H. Andrewes, F.R.S. This led him to the study of the spread of these respiratory infections as well as that of tuberculosis, a subject in which his interest continued. He also devised improved methods for the preparation and standardisation of johnin.

In 1947 he became the first Director of the Laboratory Animals' Bureau, a Medical Research Council Unit, and laid the foundations of an organisation which has already done much to improve the supply of healthy animals of the right type for laboratory purposes. He also afforded much help and encouragement in the formation of the Animal Technicians' Association. In 1949 he was appointed to a newly created Chair of Veterinary Pathology in the University of Liverpool. In this connection it may be noted that the William Prescott Chair, which became vacant on the death of Professor J. F. Craig, is now assigned to Veterinary Preventive Medicine.

Professor Glover saw service with cavalry and infantry units from 1916 to 1918, and was for a time a prisoner-of-war in German hands. He is a founder and Past-President of the Veterinary Research Club, and became a member of the Medical Research Club soon after his appointment at Mill Hill. He has represented the former body on the Council N.V.M.A., where he did valuable work particularly on the Editorial Committee, of which he was Chairman in 1946-47. He is a member of the Governing Body of the Foot-and-Mouth Disease Research Institute, has served on many of the Technical Committees and Conferences of the Agricultural Research Council, and is the present Chairman of its Conference on Tuberculosis. He has held the offices of President and Honorary Secretary of the Section of Comparative Medicine of the Royal Society of Medicine and has been a member of the Editorial Board of the *Journal of Comparative Pathology and Therapeutics* since 1943. In 1952 he was awarded the Dalrymple-Champneys Prize of our Association in recognition of his outstanding work in the furtherance of veterinary research. He has had two periods of membership of the Council of the Royal College of Veterinary Surgeons, namely, from 1938 to 1939 and from 1944 to the present time, and he now sits as one of the representatives of the University of Liverpool.

Professor Glover is specially to be congratulated on occupying the Presidential Chair in this Coronation Year, and he will have the good wishes of the whole profession that his term of office may prove to be a most successful one.

This is a brief history of the Section of Comparative Medicine of the Royal Society of Medicine, a section where those whose interests are in human medicine and animal medicine can meet to learn, teach and discuss those matters which have so much in common. It is not intended that the fields of discussion should be narrow and specialised and veterinary surgeons registered at the Royal College of Veterinary Surgeons are eligible as candidates for Fellowship of the Society. There are many privileges for Fellows; they may attend the ordinary meetings, and take part in the discussions of any section; there are 26 sections. The library contains nearly 250,000 volumes and 1,300 current periodicals; it is available for study, books may be borrowed and bibliographies prepared. The proceedings of the Society are published monthly and are issued gratis to all Fellows. The Society's House is at 1, Wimpole Street, W.1, and application forms for election are obtainable from the Secretary.



[*Portrait by Miles & Kaye, 100, Southampton Row, W.C.1.*

PROFESSOR R. E. GLOVER, M.A., B.Sc., F.R.C.V.S.

President, Royal College of Veterinary Surgeons, 1953-54.

CLINICAL COMMUNICATION

IDIOPATHIC ANAEMIA IN A BITCH

K. E. BROWN,
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AND
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A.R.C., Compton, Berks

Subject.—Eighteen-month-old West Highland bitch.

History.—The onset of symptoms was sudden. The owner noticed that the bitch was lethargic for a day or two and then rapidly became weaker until near a condition of collapse.

Clinical Findings.—When seen at the surgery (8.4.52) the bitch was in a condition of collapse, unable to stand, and gasping for breath. The mucous membranes were extremely pale and the heart beat was fast and weak. The temperature was 103° F. The owner said that the animal's condition had deteriorated very much over the last 90 minutes.

Provisional Diagnosis.—Severe anaemia following internal haemorrhage.

Treatment.—The bitch was kept warm and was given 2 ml. of a haemostatic serum ("Haemoplastin," P.D. & Co.) intramuscularly. This was followed by an injection into the radial vein of 40 ml. of fresh citrated blood from a dog owned by one of us. Subsequent treatment consisted of intramuscular injections of 1 ml. of 25 per cent. "Nikethamide" solution B.P. three times a day, a subcutaneous injection of 150,000 units of "Distaquaine" penicillin once a day, and 1 ml. of "Plexan" liver extract (Glaxo) twice a day.

Result of First Treatment.—Six hours after treatment began the bitch was able to stand and was given fluid by the mouth. Recovery was rapid and the bitch was sent home after three days, the owner being advised to keep it warm and to feed raw liver when possible. The mucous membranes remained very pale.

Second Attack.—Nine days after returning home the bitch was returned to the surgery in a similar condition to that shown on her first appearance, although it was less severe. The owner said that the animal had been progressing well until the previous day when it again became noticeably lethargic.

Blood Picture.—Red count 1·2 mil. P.C.V. 10·4. Smear showed hypochromia, anisocytosis, poikilocytosis, crenation, polychromasia and some normoblasts. Plasma pale (icteric index about 1).

Diagnosis.—There was no sign of haemorrhage, the pale plasma excluded the possibility of haemolytic anaemia and the presence of regenerative changes excluded aplastic anaemia. Hence it was concluded that it must be a dyshaemopoietic anaemia which, in view of the treatment given, was unlikely to be due to deficiency and which therefore must be considered idiopathic.

Second Treatment.—For three days the treatment was a repeat of that given after the first attack except that haemoplastin was omitted. For the succeeding six weeks, 1 ml. of "Plexan" was given intramuscularly every two weeks and, in view of the hypochromia, tablets of iron, copper, yeast and vitamin C were also given during this period.

Result.—Even though recovery was more delayed than on the previous occasion, the bitch improved steadily; it regained apparent health in five days but the membranes remained pale and the erythrocyte values remained unaltered.

Subsequent History.—As the erythrocyte values remained so low the owner was advised that treatment would probably be necessary throughout the animal's life, and consequently 1 ml. of "Plexan" was given each fortnight up to July 31st, a period of 16 weeks from the second attack. The owner by then had lost interest and the bitch was not seen again until it was treated for gastritis at the end of September, when liver injections were given on October 1st, 9th and 30th.

In January, 1953, the owner was leaving the district and the bitch was brought in for a final blood examination. The bitch then appeared lively but the membranes remained pale.

Haematology

Erythrocytic Picture at Various Times Throughout the Period

	April	May	June	Jan.	Av.	Normal *
R.C. (millions per c.mm.)	1·2	1·0	1·5	1·7	1·3	6·1 ± 1·0
P.C.V. (per cent.) ...	11	12	24	18	16	39 ± 5·8
Hb. (g. per 100 ml.) ...	Low	3·3	Low	5·5	4·4	13·0 ± 1·8
M.C.V. (c.μ)	92	120	160	106	119	59·0 ± 8
M.C.H.C. (per cent.) ...		27·5		30·5	29·0	34·3 ± 4·5

* Mayerson (1930)

Two haemoglobin results have been labelled low as the actual measurements were inaccurate. This was because only a photometric estimation was made on these two occasions, and subsequent work showed that the plasma although apparently clear was, on closer examination, turbid. Thus higher results were obtained photometrically than were obtained by an alkaline haematin colour comparison.

A full examination was made in January and the other details were as follows :—

W.C. 8·0 thousand, comprising : 2·5 band forms, 68 neutr., 27 lymph, 1·5 mono., 0·5 eos., 0·5 baso. This was similar to the leucocytic picture obtained in April. The smear showed anisocytosis, polychromasia, poikilocytosis and one normoblast was seen in each three fields. The plasma appeared pale and clear with a specific gravity of 1·028.

The specific gravity of the whole blood was 1·038, there was total haemolysis in 0·38 per cent. NaCl, and the coagulation time was 10 minutes.

Discussion

The investigation shows the existence in this country of an idiopathic anaemia which is macrocytic and orthochromic in type and is not relieved by the usual anti-anaemia therapy. Detweiler, Willis & Boyer (1952) recorded a very similar case in the United States. The subject was a 14-month-old miniature pinscher dog and both the erythrocytic and leucocytic pictures were in good agreement with ours, but no regenerative changes were apparent until the dog began to recover. The usual anti-anaemia therapy failed but these authors, working on the hypothesis that there might be a deficiency in anterior pituitary hormones in dwarf breeds, injected such hormones and the dog recovered.

The authors admit the *post hoc* nature of the observation but refer to an "aregenerative" anaemia recorded by Bloom (1945) as a similar anaemia occurring in another dwarf breed, the Boston terrier.

Bloom's figure for erythrocytes was 1·2 million, a figure similar to the other dogs, but his figure for haemoglobin (1·8 per cent.) is extraordinarily low and it is difficult to understand how the animal remained alive with such a severe hypochromia; he did not record the packed cell volume. Blood films did not show any regenerative changes but a marrow examination showed that although hypoplastic, the anaemia was definitely not aplastic. He also recorded a marked leucocytosis. The important point of agreement

was that his dog also failed to respond to anti-anaemia therapy and was treated by blood transfusions.

The position is confused but future observations will show if there are several types of idiopathic anaemia in the dog or only one. If there is only one then it would appear to be macrocytic and orthochromic in type, varying in its degree of hypoplasia but not aplastic, and, like most anaemias, capable of becoming hypochromic under certain conditions of deficiency.

Unfortunately, we did not find the paper by Detweiler *et al.* until we had lost touch with the owner and we cannot add to their observation on the effect of treatment by means of anterior pituitary hormones.

Summary

An idiopathic anaemia of a macrocytic orthochromic type occurring in a West Highland terrier, is described. Anti-anaemia therapy produced no improvement. Attention is drawn to a similar anaemia believed to occur in dwarf dogs in the United States, and to its possible treatment by anterior pituitary hormones.

References

Bloom, F. (1945). *J. Amer. vet med. Ass.* **107.** 220.
Detweiler, D. K., Willis, T. E., & Boyer, C. I. (1952). *Corn. Vet.* **42.** 85.
Mayerson, H. S. (1930). *Anat. Rec.* **47.** 239.

QUESTIONS AND ANSWERS

The submission of questions for inclusion in this column is welcomed; they can relate to any aspect of veterinary work, but must be of a general nature—questions cannot be considered in which information is sought regarding diagnosis or treatment of specific cases, nor for which solely a private reply is desired. For purposes of record, each question is numbered, and those submitting questions are required to furnish (not for publication) name and address.

Answers to readers' queries represent exclusively the personal opinions of the writers, and criticism of the replies will be appreciated.

All communications should be addressed to the Editor.

Vesicular Vaginitis in a Dairy Herd

Q. 428.—*What is the cause of and treatment for vesicular vaginitis in a herd of dairy cows? Vaginitis, sometimes very acute, is followed by the appearance of pin-head sized vesicles, usually in a perpendicular line about ¼ inch wide and 1½ inches from the lips of the vagina. Syringeing with chinosol, acriflavine and Lugol's iodine appears to have very little effect. Some of the worst cases are in in-calf cows, but there has recently been trouble with getting cows in calf. Herd management is excellent. Some of the affected cows have been served by the owner's bull and others artificially inseminated.*

A.—It is not clear if the questioner is referring to contagious vesicular vaginitis, bull-burn, a pathogenic condition probably due to a filterable virus, and characterised by great discomfort, frequent micturition, etc., or to the so-called granular vaginitis, which is so often seen in cattle, both fertile and infertile.

There is no good evidence that the latter condition is, in fact, pathogenic, and the granules are probably lymphadenoid tissue which becomes more prominent when infection of the utero-tubular structure exists and also as a physiological response at certain times in normal animals.

Some degree of vaginitis can occur both in vibriosis and trichomoniasis, and in these cases treatment should, of course, be directed to the primary disease. It is felt that many animals are treated for so-called vaginitis when they are, in fact, quite normal.

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Coloration in Horses

Q. 429.—(1) *Under the R.C.V.S. classification of horse colours, how would the following animal be described—brown coat, black pigmented skin, white mane and tail?*

(2) *Also give the differential points of a blue dun and a blue roan.*

A.—(1) The respondent is not aware of any special description for a brown horse with a white mane and tail, which is a very rare combination, and in his opinion should be described as stated.

(2) As to the points of difference between a blue dun and a blue roan, the first is a whole colour, and the second a mixture of colours. A blue dun has a black mane and tail and sometimes a black stripe down the back and stripes on the withers, whereas a blue roan usually has white hairs mixed with black in the mane and tail and black legs below the knees and hocks.

The colour of the blue dun is a dilute black evenly distributed over the body giving a blue colour. The blue roan is a mixture of black or brown with white hairs which gives a blue tinge to the coat.

Reference

Description of Colour and Markings of Horses, approved by the Royal College of Veterinary Surgeons.

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Persistent Coprophagy in Greyhound Puppies

Q. 430.—*Can any reason be given for the tendency of four- to five-month-old greyhound puppies persistently to eat excreta? They appear to be well fed and normal in every other respect.*

A.—Eating of excreta by greyhound puppies is a vice easily learned and difficult to stop. It is comparable to crib-biting in the horse, is born of boredom, and is usually preventable.

The reason why greyhound puppies are so susceptible to this is that they like exercise and need it, although they do not readily take it themselves without incentive.

Preventive measures should be :—

(*a*) Reduce to a minimum the time they spend in their kennel behind closed doors.

(*b*) Have an alternative run and change over frequently so that they have a fresh interest all the time.

(*c*) If possible, split the litter or litters and let puppies chase each other alongside adjacent fences to a third part of the litter running at right angles to them and always attracting them away from the sleeping and feeding quarters.

(*d*) Check the first tendency by supervision.

Puppies so reared will not readily eat their excreta if food supply is ample.

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Garlic as an Anthelmintic

Q. 431.—*Garlic is said to be valuable as an anthelmintic. (a) Can you say if this is correct? (b) If so, what is the active principle? (c) Against what worms is it effective and what is the dosage?*

A.—For many centuries garlic has been credited with anthelmintic properties and was being recommended as an adjuvant to vermicides and vermifuges by the famous Persian physician, Avicenna (A.D. 980 to 1036). It is still used occasionally by the medical profession for the same purpose (Harant & Carron, 1949 ; Osimani, 1948), and sometimes alone for the treatment of *Enterobius* and *Ascaris* (Clapham, 1935).

The chief use which has been suggested for it in veterinary medicine has been as a treatment for lungworms.

In earlier days garlic was given in the food to control gapeworm in poultry on the assumption that sufficient would be excreted into the respiratory tract to cause the worms to be expelled (Chopra & Chandler, 1928). In 1935 Clapham showed that this method was ineffective but that the synthetic product allyl sulphide, or alternatively pure garlic oil, diluted with one or two parts of linseed oil forcibly administered by mouth were fairly effective. One-third minim of the active agent was given three times a day to 18 22-day-old chicks until five doses had been administered. The drug caused rupture of the worms in most cases (Clapham, 1935).

Garlic is also said to yield a volatile oil, resembling that obtained from mustard, which gives rise to allyl *iso*thiocyanate or some related substance and the respondent believes that one of these garlic derivatives was issued by an English firm for a user trial in cases of husk in cattle about six or seven years ago, but apparently was not successful. In 1952 a British Patent Specification taken out for a somewhat similar substance, M. Allyl-oxyphenyl-*iso*thiocyanate, claimed that it had an anthelmintic effect against *Enterobius* in man and against ascarids and tapeworms in cats, although the grounds on which the claims were based were not given.

To summarise the situation one might say that with the rather doubtful exception of the treatment for gapeworms in poultry the proponents of the use of garlic and its derivatives for anthelmintic purposes have failed to provide any really satisfactory evidence as to its efficacy despite their having had at least a millennium to do so.

The writer does not know the dose rate of garlic itself for veterinary patients but those who might wish to use it could base their recommendations on the human dose which is given as 2 to 8 grammes of Allium B.P.C., whilst noting that fatalities have occurred in children following administration of too large an amount.

References

Chopra, R. N., & Chandler, A. C. (1928). Anthelmintics and Their Uses. Baillière, Tindall & Cox ; p. 232.

Clapham, P. A. (1935). *J. Helminth.* **13.** (1). 3-8.

Harant, H., & Carron, M. (1949). *Bull. Soc. Path. exot.* **42.** (9-10). 461-463.

Osimani, J. J. (1948). *Rev. Kub. Med. Trop. Parasit.* **4.** (7). 143-145.

RABIES UNDER CONTROL IN ALBERTA

Government veterinary officials now believe that the rabies outbreak in Northern Alberta is under control and that it should become apparent within another month whether the disease has been eradicated. Reporting this, the Calgary Correspondent of *The Times* adds that the sharp decline in the incidence of the disease is attributed to widespread destruction of wild animals in the affected regions, although it is thought that hibernation of females during the breeding season may have contributed. More than 50,000 wild animals, most of them wolves, coyotes and foxes, have been destroyed by trapping, poisoning and organised shoots.

Some concern remains that the disease will be reintroduced into Alberta if there is further migration of wolves and coyotes southward from the north-west territories this year on a scale similar to last year's. As a precautionary measure, the Government ice-breaker, *d'Iberville*, which took part in the Coronation review at Spithead, will carry 7,000 doses of anti-rabies vaccine for use among dog teams at Eskimo outposts in the eastern Arctic when she leaves Montreal on July 16th.

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Weekly Wisdom

The advancement of human rights is a matter for education rather than for politics.—Mr. Leon Zeitlin in *The Times.*

ABSTRACTS

The Cattle Trypanosomiases : A Cryptic Focus of Parasites *

Fiennes describes the presence of trypanosomes, both *T. vivax* and *T. congolense*, in the hearts of cattle associated with lesions thought to be of sufficient severity to account for many of the symptoms and pathological changes found. The cattle, which were in contact with tsetse flies, had been treated with antrycide or dimidium as a prophylactic. Small numbers of *T. congolense* and *T. vivax* were found only sporadically in blood smears and the presence of the parasites in the heart associated with severe lesions was regarded as a more reasonable explanation of the more serious symptoms and heavy mortality than the mild blood infection. Fiennes refers to this form of the disease as " secondary trypanosomiasis." One beast which had not been treated with either drug died from acute trypanosomiasis showing intense localisation of *T. congolense* in the cardiac capillaries. With the exception of the hearts, trypanosomes were only sporadically present in the organs examined ; most of the parasites (in the hearts) were degenerate.

Fiennes has drawn attention earlier to the specific effect of *T. congolense* in causing dilatation of the capillaries and he considers this property may have a bearing on the development of heart lesions in these cases. The lesions found were widespread necrosis of the myocardial fibres with disintegration and replacement by nodules of lymphocytic infiltration. Capillaries were invariably dilated. Four plates of 15 photomicrographs illustrate the histology of the lesions.

J. S. S.

* **The Cattle Trypanosomiases : A Cryptic Focus of Parasites in Association with a Secondary Stage of Disease.** Fiennes, R. N. T.-W. (1952). *Brit. Vet. J.* **108.** 298-306.

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Development by Sheep of Acquired Resistance to *Tr. axei* *

The author reared lambs free from all " internal parasites," except *Strongyloides papillosus* and coccidia, which were present in all the lambs used. For each of two experiments the author used six pairs of twin lambs, in order to reduce the differences in the resistance to infection between the infected and the control lambs. When the lambs were one month old one of each pair was given the following doses of the infective larvae of *Trichostrongylus axei*: No. 1, one dose of 10,000 larvae; No. 2, 10 daily doses of 1,000; No. 3, one dose of 15,000; No. 4, 15 daily doses of 1,000; No. 5, one dose of 20,000; No. 6, 20 daily doses of 1,000. While they were suckling, the infected and the control lambs were run together, but the pens were cleaned daily to guard the controls. At three months old the lambs were weaned and the infected ones were kept separate. At five months old all were given 40 daily doses of 4,000 larvae of *Tr. axei*, and all were observed until they were nine months old. The lambs were weighed throughout each week and egg counts were done. They were then killed and the numbers of worms ascertained by a dilution technique. A table gives the results obtained.

The smaller doses of larvae increased the resistance to

* **The Development of the Acquired Resistance by Sheep to Infestation with the Nematode *Trichostrongylus axei*.** Gibson, T. E. (1952). *J. Helminthol.* **25.** No. 1.

(*Concluded at foot of col. 1, page 437*)

REPORT

[Report on Animal Health Services for the Years 1949, 1950 and 1951. H.M.S.O. 3s. 6d.]

Prior to the war these official reports were issued annually. Then came a long gap eventually closed by a report covering the decade 1938-47, which was quite inadequate as a record of the effort and performance of the State Veterinary Service during those difficult years; 1948 had a report to itself. Now we have one for the succeeding three years. This uneven periodicity does not help the reader to assess progress.

Parts 1 to 5 of the present report cover proceedings under the Diseases of Animals Acts and Parts 6 to 8 the non-statutory duties of the Animal Health Division.

The opening subject is foot-and-mouth disease; two normally quiet though vigilant years followed by the first gust of the storm which was to sweep across from the Continent in 1952. The figures and the narrative account do not reflect the strain which was placed on the veterinary staff nor the devoted effort which was eventually applauded publicly. Swine fever comes next, outbreaks rising from five in 1949 to 1,343 in 1951, with a fourfold increase in crystal violet vaccination as owners became alarmed—204,000 doses issued in the latter year represent a disappointingly small fraction of the pig population. Sheep scab showed a pronounced diminution following the widespread use of benzene-hexachloride dips, first approved in 1948. Of the other scheduled diseases, fowl pest commands most interest because 1950 saw the subacute type, so difficult to detect but a very real menace to the poultry industry.

In 1950, what is perhaps optimistically called the final stage in the campaign against bovine tuberculosis began with the revised Attested Herds Scheme and authority for area eradication. The rate of progress accelerated and has now become embarrassingly satisfactory. Routine clinical examinations of dairy cattle are overshadowed by tuberculin testing. Eleven further cases of the recovery of *Br. melitensis* from milk are recorded, and the slaughter of 27 affected cows, but no evidence of consequent human illness had been found. The voluntary " Scheme for the Control of Diseases of Dairy Cattle " terminated officially in 1950, but with official blessing. Strain 19 vaccination of calves declined slightly in 1951 everywhere but in Scotland, where appreciation of good value is keen and memories of the " abortion storm " seem longer. This is like ceasing to pay insurance premiums because the house is not actually burning.

Regulations governing import, export and transit are dealt with in Parts 3, 4 and 5. We are reminded that nine cases of rabies have developed among dogs in quarantine since 1945. The recommendations of the Rosebery Committee, which reviewed the export trade in horses to the Continent, are summarised.

Part 6 reports the work done at the Ministry's laboratories, Weybridge and Lasswade, and an entomological survey at Carlisle, and Part 7 covers the Veterinary Investigation Service. Most of the research work is published separately in various journals but perusal of these parts of the report gives a good indication of the very wide range of subjects dealt with. One does not get the laboratory activities into perspective without turning to the tables of figures in appendices to realise the volume of routine and special diagnostic work done, and the scale of production of biologicals for use in the field. Seven and a half million doses of mammalian tuberculin in a year is one item not equalled elsewhere in the world.

Part 8 records the work of the Ministry's own A.I. centres at Reading and Ruthin.

The impression left from reading this report of three years is that it does not adequately reflect the immense service given by the Animal Health Division. Official papers must be impersonal, but this one is more like a series of score cards with some annotations than a living account of events vital to agriculture and the veterinary profession. Three years is too long a period to contain in the one document and 18 months is too long a delay before publication. We should prefer an " Annual Report of the Chief Veterinary Officer," signed and including a commentary to give colour to the factual material. However, members who study the present report diligently will find in it many things of interest and importance and some shadow of the contribution which the Animal Health Division makes to the national economy and to us.

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the second infection, but the higher doses of 20,000 or more larvae decreased it. Intermediate doses neither increased nor decreased the resistance. The author suggests that resistance developed in the field may be due partly to intake of small numbers of larvae early in life. It may be beneficial to expose young lambs to light infection, but it is dangerous to expose them to heavy infection. Practical recommendations cannot be made, because it is difficult to estimate the precise doses of larvae which will stimulate resistance. Attempts to promote resistance by administration of graded doses of infective larvae cannot be recommended.

G. L.

REVIEW

[The Anatomy of the Domestic Animals. By Septimus Sisson. Fourth edition, revised by Professor J. D. Grossman. 972 pages, 736 illustrations. W. B. Saunders & Co., Ltd., London (7, Grape Street, W.C.2) and Philadelphia. Price 75s.]

Sisson's Anatomy needs no introduction to the veterinary profession. The scope of this fourth edition and the material presented remain practically unchanged. The horse has been retained as the standard animal for description, the other domestic animals being treated on a comparative basis. The only major alteration in the book has been a change in the placing of the descriptive terms and the rearrangement of the osteology of the horse to enable the student to make a more efficient use of the text early in his study of anatomy. In the third edition an entirely new feature was the introduction of a chapter on the anatomy of the chicken, and it is suggested that the introduction of a chapter on the anatomy of the cat would enhance greatly the scope and value of any future editions. Also, it is suggested that the anatomy of the dog merits being treated on more than a comparative basis. A few new diagrams and illustrations have been added. These include models and dissections of the newborn calf, diagrams showing the arrangement of the omentum in the ox and the structure of the bovine teat wall. In spite of these criticisms the book remains the foremost standard work on the anatomy of domestic animals and is commended to veterinary students and all those interested in comparative anatomy. It is printed on a good high-gloss paper and contains 736 superb illustrations.

IN PARLIAMENT

Vibrio foetus Infection in Dairy Herds

In the House of Lords on July 2nd, Viscount Hudson asked Her Majesty's Government what steps are being taken to counter the menace of *vibrio foetus* in the dairy herds of this country. Abortion (he said) has long been a source of serious loss to the British dairy farmer. During the war, thanks to the co-operation of the United States Department of Agriculture, we were enabled to introduce what is known as strain 19 vaccination. The result has been virtual elimination of contagious abortion in our herds. This has disclosed the existence on a scale formerly unrecognised of another cause of abortion, namely, *vibrio foetus*. The latter has undoubtedly for years been masked by the former. This disease is widespread not only in this country but also in the U.S.A. and particularly in Holland. Up till very recently, a matter of months, diagnosis has been exceptionally difficult. Even now, as a result of recent researches, it is difficult in the case of the cow, and in the case of the bull, the disease can be diagnosed only by putting the bull on an unspecified number of maiden heifers, at the best of times an expensive proceeding. It is believed that a cow can be cured, but in any case after a certain time she develops a natural immunity. As far as we know at present there is no cure for a bull. Again, as far as we know, the bull is the only spreader of the disease. This places the ordinary farmer, and especially the pedigree breeder, in a great difficulty. The ordinary farmer has been in the habit of lending his bull for service to the females of his neighbours. Clearly he must be warned to stop this practice because of its dangers, and that is one of the objects of this Question, and will be, I hope, of Lord Carrington's answer.

The pedigree breeder is particularly affected. It has hitherto been accepted theory and practice that a young bull should be tried out on a certain number of cows and heifers and then put away till the results of his progeny are known. If he is of exceptional parentage, it has been the accepted and good practice to lend him either to a neighbouring farmer or to another breeder to use till such time as he was required back in the herd of his original breeder or owner. There is no doubt that this accepted good practice has in fact led to the wide spread of *vibrio* in some of the best pedigree herds in the country, and clearly it should cease, with the corresponding serious effect on the production and subsequent spread of the blood of proven sires Personally I think that is a tragedy.

There is a third possible source of spread of this disease, and that is through artificial insemination at both Milk Marketing Board and non-Milk Marketing Board centres. Proof of this is very difficult to obtain, but it is reasonably certain that centres pursuing the accepted good practice of acquiring proven sires have in some instances acquired bulls infected with *vibrio*, and have in consequence helped to spread it among clean herds. No possible blame can be attached to them, and it is probable that any spread of the disease by artificial insemination is infinitely less than would have occurred naturally had artificial insemination not existed. I think it is only fair to the Milk Marketing Board and other centres to make this plain.

We are, however, faced with a difficulty. The Milk Marketing Board believe that they have evolved a technique of buffering their bulls' semen with a triple set of antibiotics, which they believe effectively kills the *vibrio* in the semen, thus rendering it safe to use even on clean herds. I believe that the Ministry " vets." entertain grave doubts about the efficacy of this treatment. It is, I believe, accepted that the technique adopted by the Milk Marketing Board until recently, namely, double buffering, was ineffective in rendering an infected bull's semen safe. What is, I submit to your Lordships, important is that a final and authoritative verdict on the efficacy of the triple buffering should be reached at an early date, and I hope the noble Lord, Lord Carrington, will be able to reassure us on this point. Meanwhile, the farming or, at all events, the dairy farming community of the country should be emphatically warned against the dangers of using other people's bulls, or bulls that have been used on other people's cows. They would also be well advised to get their " vets." to make an early investigation into the venereal health of their own herds.

Lord Carrington having expressed his gratitude to Lord Hudson for drawing attention to this problem, said: I can say at once that we agree with what he has said. The importance of *vibrio foetus* infection has, as he said, come to light only comparatively recently, as other diseases causing infertility have been brought under control. As long ago as 1913 workers in this country had set up abortion experimentally with the *vibrio foetus* organism, but the view was held then, and for some time afterwards, that the infection was not very important. My noble Friend has spoken of the way in which the use of S.19 vaccine has reduced the incidence of contagious abortion. Trichomonas infection has also been recognised as an important cause of abortion and infertility in certain herds. Here again, research has led the way to suitable methods of control. The use of artificial insemination, combined with the treatment of the female, makes it possible to control this disease and the resultant infertility. The application of effective control measures against these two diseases, and the consequent reduction of the incidence of abortion and infertility caused by them, has resulted in the unmasking of *vibrio foetus* as another cause of infertility, the importance of which was hitherto largely unsuspected.

Intensive research into this disease is being carried on at the Ministry of Agriculture's Veterinary Laboratory and elsewhere, and the results of these investigations into the nature of the disease and methods of control have been, and will continue to be, published for the information of practising veterinary surgeons. In addition, the services of the Ministry's specialist officers are freely available to veterinary surgeons who encounter infertility problems which may be due to *vibrio foetus*.

My noble Friend has rightly drawn attention to the great risk which attaches to hiring or lending bulls for service in other herds. It is well known that in many cases infection has been introduced into a herd by an infected bull, or by an infected female which infects the stock bull when first served by him. The only advice which can be given, in the absence of a specific test for infection in the male, is to maintain a herd as a self-contained breeding unit, or to introduce only maiden heifers or bulls which have never served. If other animals must be bought they should be bought from a herd only after a full enquiry has been made into its breeding history, in the same way as is practised in selecting bulls for artificial insemination centres.

In view of the possibility that *vibrio foetus* infection may be spread by infected semen stringent measures are taken by the Department to ensure that an infected bull is not approved for use at an artificial insemination centre. Although there is no direct test for *vibrio foetus* infection in the bull, and the organism can only rarely be recovered from an infected animal, every possible precaution is taken to ensure that an infected bull is not approved for artificial insemination purposes. Enquiries are made into the service records of the bull, and the breeding history of the herd in which he is located, and if necessary the history of any herds in which he has previously been. Material from females in the herd or herds concerned is also examined when necessary, special attention being paid to any maiden heifers which may have been served. If, as a result of these enquiries and examinations, any suspicion of infection attaches to the bull, it is not approved for artificial insemination. In addition, the breeding records of bulls at artificial insemination centres are watched closely. If there is a noticeable fall in the conception rate of a particular bull, a special examination is carried out. In all suspicious cases the bull is removed.

My noble Friend mentioned the Milk Marketing Board's method of triple buffering of semen. This is said to be a useful adjunct to control, but my Department regard it only as a second line of defence. While there is no experimental proof that this method of treating semen is effective in all cases, the evidence in the field does not indicate that infection is spread from artificial insemination centres to any extent. On the contrary, artificial insemination is a very useful method of limiting the spread of venereal infections.

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QUESTIONS

Warble Fly Order (Administration)

Mr. Hurd (July 2nd) asked the Minister of Agriculture what progress has been made this summer in dealing with warble fly in cattle; and what action has been taken under the Warble Fly Order.

Sir T. Dugdale: My Department has again conducted a publicity campaign to remind farmers of their obligation to dress warble-infested cattle, but it is too early yet to assess the effectiveness of this campaign since the dressing season has only just ended. Preliminary reports indicate that the response from farmers may have been somewhat better this year than in the past. The administration of the Warble Fly Order is the responsibility of the police and local authorities, and I regret I have no information about any proceedings that have been taken under the Order.

Mr. Hurd: Will my right hon. Friend keep a much closer watch on this problem than has been kept for many years past and, in view of the success of the Ministry's methods in dealing with sheep scab, see whether the same kind of method cannot be applied to warble fly?

Sir T. Dugdale: I think my hon. Friend will agree that this is a more difficult problem to spot. My Department is carrying out an experiment in the Isle of Wight to assess how it might be possible to exercise a very tight control, and how much it will cost.

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Fowl Typhoid, Yorkshire (Enquiry)

Sir L. Ropner (July 2nd) asked the Minister of Agriculture whether he will now make a statement concerning the enquiry which his Department is conducting in Yorkshire into the incidence of fowl typhoid.

Sir T. Dugdale: This enquiry is being conducted by members of my veterinary staff. The main objects are to obtain more information about the behaviour and control of this disease in the field and to investigate further the use of vaccination as a preventive measure. The enquiry is still going on. A new vaccine is being used experimentally on selected flocks, but it will be some time before results can be assessed.

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Fowl Pest

Mr. Finlay (July 2nd) asked the Minister of Agriculture to what extent fowl pest has now abated; and when he will be able to lift the ban against fewer than 25 head of live poultry being sent to a public market.

Sir T. Dugdale: I am sorry to say that fowl pest has not abated. There have been 457 outbreaks since January 1st, 1953, compared with 498 in the whole of 1952. I cannot say when it will be possible to lift the ban on fewer than 25 head of store poultry being sent to market.

Mr. Finlay: Is my right hon. Friend aware that this ban operates partially on smallholders and will he consider, in individual areas where the position improves, relaxing it progressively?

Sir T. Dugdale: I am always ready to consider relaxing restrictions of this kind—I know they are irksome—but the whole point is to try to help the industry.

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On Thursday of last week the Dogs (Protection of Livestock) Bill and the Slaughter of Animals (Pigs) Bill passed through their Committee stages in the House of Lords.

NOTES AND NEWS

Diary of Events

July 15th.—Summer Meeting of the Lancashire Division, B.V.A., at Aintree, 3 p.m.

July 15th.—Meeting of the Editorial Committee, B.V.A., 2 p.m.; Executive, 3 p.m.

July 16th.—Annual General Meeting of the Association of Veterinary Teachers and Research Workers (Northern Region) at the Veterinary Investigation Centre, Quarry Dene, Weetwood Lane, Leeds, 11 a.m.

July 16th.—Summer Meeting of the Central Veterinary Society, B.V.A., at the Wellcome Research Station, Frant, Tunbridge Wells, 11.30 a.m.

July 16th.—Summer Meeting of the Eastern Counties Division, B.V.A., at Bury St. Edmunds (Everard's Hotel), 10.30 a.m.

July 17th.—Meeting of the North Wales Division, B.V.A., at Bettws-y-Coed (Memorial Hall), 5.30 p.m.

July 17th.—Meeting of the Biochemical Society, in the Department of Biochemistry, Bute Medical Buildings, St. Andrews, Fife, 11 a.m.

July 17th.—Summer Meeting of the Mid-West Veterinary Association, B.V.A., at the University of Bristol Veterinary School, 2 p.m.

July 17th.—Meeting of the Yorkshire Division, B.V.A., at the Government Buildings, Crosby Road, Northallerton, at 2.30 p.m.

July 17th.—Annual General Meeting of the Association of Veterinary Teachers and Research Workers (Southern Section) at the Rothamsted Experimental Station, Harpenden, Herts, 11.15 a.m.

July 23rd.—Meeting of the Midland Counties Division, B.V.A., at Nuneaton (The Newdegate Arms), 2.30 p.m.

July Meetings of B.V.A. Council and Committees

At 36, Gordon Square, London, W.C.1

Wednesday, July 29th, 1953.
11 a.m., Organising Committee.
2.15 p.m., Home Appointments Committee.
4 p.m., Parliamentary and Public Relations Committee.
Thursday, July 30th, 1953.
10 a.m., Veterinary State Medicine Committee.
12.30 p.m., Finance Sub-committee.
2 p.m., General Purposes and Finance Committee.

At the Connaught Rooms, Great Queen Street, W.C.2
Friday, July 31st, 1953.
11 a.m., Council meeting.

Aug. 9th—15th.—XVth International Veterinary Congress, Stockholm, Sweden.

Sept. 6th—12th.—Seventy-first Annual General Meeting and Congress of the British Veterinary Association, at Aberdeen.

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PERSONAL

Chairs in the Royal (Dick) School of Veterinary Studies

APPOINTMENTS BY EDINBURGH UNIVERSITY COURT

The University Court of the University of Edinburgh have made the following appointments to chairs which have been instituted in the Royal (Dick) School of Veterinary Studies of the University.

The William Dick Chair of Veterinary Surgery—Mr. William McGregor Mitchell, M.C., T.D., B.SC., M.B., CH.B., F.R.C.V.S., F.R.S.E.

The William Dick Chair of Veterinary Medicine—Mr. George Frederick Boddie, B.SC., M.R.C.V.S., F.R.S.E.

The William Dick Chair of Veterinary Hygiene and Preventive Medicine—Mr. Alexander Robertson, M.A., B.SC., PH.D., M.R.C.V.S., F.R.I.C., F.R.S.E.

MR. WILLIAM MITCHELL

Mr. Mitchell, who was born in 1888, was educated privately and later studied at the Royal (Dick) Veterinary College, the Royal Veterinary College, London, and the University of Edinburgh. He qualified as a veterinary surgeon in 1909, and after a period of service as assistant in anatomy to Dr. O. Charnock Bradley, Principal of the Royal (Dick) Veterinary College, he proceeded to the degree of Bachelor of Science in the Department of Veterinary Science at the University of Edinburgh, and later to the degrees of Bachelor of Medicine and Bachelor of Surgery.

Mr. Mitchell was appointed Professor of Veterinary Surgery and Obstetrics in the Royal (Dick) Veterinary College in 1919 and in 1946 he was appointed Principal of the College. When in 1951 the Royal (Dick) Veterinary College was embodied within the University of Edinburgh he was appointed to a Senior Lectureship in Veterinary Surgery, and was also appointed Director of Veterinary Education. He served in both world wars—in the first as a Captain in the Royal Army Veterinary Corps, when he was awarded the Military Cross and was mentioned in dispatches, and in the second, when for a period of three years he acted as D.A.D.M.S. in the Royal Army Medical Corps. In the year 1946-47 Mr. Mitchell was President of the National Veterinary Medical Association, now the British Veterinary Association. He has served on a number of Government committees, is a member of Council of the Royal College of Veterinary Surgeons and Director of the Scottish Society for the Prevention of Cruelty to Animals, and has contributed a number of papers to veterinary journals. As announced in our issue of June 13th, Professor Mitchell was presented with the diploma of Honorary Fellowship of the Royal College of Veterinary Surgeons at the meetings of Council, R.C.V.S., held recently in Edinburgh, in recognition of his eminence as a teacher and of his contribution to the advancement of the prestige of the school of which he is Principal.

MR. GEORGE F. BODDIE

Mr. Boddie was born in 1900. He was educated at Merchiston Castle School, at the Royal (Dick) Veterinary College and at the University of Edinburgh. After a period of war service at sea he obtained his M.R.C.V.S. qualification in 1923, and in 1924 he was admitted to the degree of Bachelor of Science in the Department of Veterinary Science at the University of Edinburgh.

Following a period of service as a clinical assistant at the Royal (Dick) Veterinary College, Mr. Boddie engaged in private practice in Auchterarder until 1930, when he returned to Edinburgh to take over the duties of the Chair of Medicine and Materia Medica at the Royal (Dick) Veterinary College. At the embodiment of the College within the University he was appointed to a Senior Lectureship in Veterinary Medicine. He is a member of Council of the Royal College of Veterinary Surgeons. Mr. Boddie has published two books on veterinary medicine and therapeutics and has contributed many papers to veterinary journals.

MR. ALEXANDER ROBERTSON

Born at Aberdeen in 1908, Mr. Robertson was educated at Mackie Academy, Stonehaven, and at Aberdeen University, where he graduated in arts in 1929 and in science in 1930. At the University he was awarded a Colonial Office Animal Health Scholarship tenable at the Royal (Dick) Veterinary College, and in 1934 he obtained the M.R.C.V.S. diploma and was awarded the Fitzwygram Prize of the Royal College of Veterinary Surgeons and the James Tindall Post-graduate Scholarships.

After a short period as Junior Lecturer in Anatomy at the Royal (Dick) College, Mr. Robertson joined the field staff of the Ministry of Agriculture as a Veterinary Inspector, and in 1936 he was transferred to the Ministry's veterinary laboratory at Weybridge for special investigation into bovine tuberculosis. While he was a Senior Lecturer in Physiology at the Royal (Dick) College from 1938 to 1944 he undertook research into problems associated with fat metabolism in sheep, for which, in 1940, he was awarded the degree of Doctor of Philosophy by Edinburgh University.

Mr. Robertson was appointed Professor of Hygiene, Dietetics and Animal Husbandry in the Royal (Dick) Veterinary College in 1944, and on the embodiment of the College within the University he was appointed to a Senior Lectureship in Veterinary Hygiene. He is a Fellow of the Royal Institute of Chemistry, of the Royal Sanitary Institute, and of the Royal Society of Edinburgh. He is the author of numerous publications in veterinary and other scientific journals and has served and is serving on a number of Government committees, while he is a member of Council, B.V.A., and Chairman of its Veterinary State Medicine Committee.

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Births.—Pitcher.—On June 29th, 1953, at Princess Christian Nursing Home, Windsor, to Barbara, wife of Leighton Pitcher, M.R.C.V.S., 66, Coningsby Road, High Wycombe, a brother for John.

Wynne.—On June 29th, 1953, at West Wales Hospital, to Glenys, wife of Morgan Wynne, M.R.C.V.S., Llandyssul, a son—Richard.

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Marriage.—Houston—Vivian.—On Saturday, June 27th, 1953, at St. Michael's, Chester Square, Lieutenant Alexander William Houston, R.N., only son of Mr. A. Houston, M.R.C.V.S., and Mrs. Houston, and the Hon. Averil Vivian, youngest daughter of the late Lord and Lady Swansea. Canon E. E. Eddowes and the Rev. C. E. M. Roderick took part in the service.

The bride was given away by her brother, Lord Swansea. She had two child attendants, Sarah Eden and Jane Humphries, and two older bridesmaids, Miss Heather Griffiths and Miss Ann Ryan. Mr. Hugh Hanning was best man. Brother officers of the bridegroom formed a guard of honour. In addition to the bridegroom's father and his cousin, Mr. A. H. Andrew, several other members of the veterinary profession and their ladies were present, including Mr. and Mrs. J. N. Ritchie, Mr. and Mrs. A. D. J. Brennan and Mr. and Mrs. John Reid.

The bride's brother and sister, Lord Swansea and the Hon. Mrs. Charles Bernard, held a reception at 6, Stanhope Gate. The honeymoon is being spent in the Balearic Islands.

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Mr. Michael Steele-Bodger an England Selector.—At last week's annual meeting of the Rugby Football Union Mr. Michael R. Steele-Bodger, M.R.C.V.S., of Tamworth, was appointed to succeed Mr. H. B. Toft on the England selection committee. In 1948, Mr. Steele-Bodger, then in his third season as an international forward, held the distinction, unique for a veterinary student—he was at the "Dick" College—of continuous selection for his country since his appearance against Wales in 1946, when Captain of the Cambridge XV.

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The coloured film of Stonehaven's Coronation Day pageant procession and church parade, shown in the Upper Town Hall, Stonehaven, and attended by the Provost and members and officials of the Town Council, was taken by Mr. G. S. Ziffo, M.R.C.V.S.

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THE NEW FITZWYGRAM AND WILLIAMS, WALLEY AND LAWSON PRIZES

R.C.V.S. Awards for 1950 and 1951

In the issue of this journal of May 24th, 1952, our contributor W. G. R. O. traced the origin and history of the above prizes and outlined the circumstances necessitating the introduction of the composite scheme there detailed, as approved by the Minister of Education to govern their award for the future, the Council of the Royal College of Veterinary Surgeons, in consequence of the transfer to the Universities of veterinary education and examinations, being unable to continue the conditions originally laid down by the founders.

Briefly to recapitulate the new conditions, a Prize Board selects from the syllabus for the M.R.C.V.S. diploma or registrable degree of a university, a subject for a prize essay. When, in due course, the essays have been adjudged by the Board, that held to be the best is awarded the Fitzwygram Prize for the year to the value of 30 guineas in cash, together with a prize certificate; the second best is awarded the Williams, Walley and Lawson Prize for the year to the value of 20 guineas in cash, together with a prize certificate. As no awards were possible in the years 1950 and 1951, the Council has given each eligible graduate the opportunity to compete for these prizes retrospectively in respect of these years.

The essay subjects were:—

1950 Graduates: "Animal Husbandry; its relation to animal health and food production."

1951 Graduates: "Infectious diseases of cattle, sheep, pigs and poultry; their control."

1952 Graduates: "Breeding methods; their relation to improvement in food production from farm animals including poultry."

The following awards have been announced:—

1950.—Fitzwygram Prize unawarded.

Williams, Walley and Lawson Prize: Mr. Maurice Church Lancaster, B.Sc. (Edin.), M.R.C.V.S., graduated at Edinburgh July 18th, 1941. Now of Evesham, Worcs.

1951.—Fitzwygram Prize: Mr. Ian D. B. Newsom, M.R.C.V.S., graduated at Edinburgh June 29th, 1951. Now of the Ministry of Agriculture's Veterinary Laboratory, New Haw, Weybridge.

Williams, Walley and Lawson Prize: Mr. Dennis George Howell, B.Sc. (Lond.), M.R.C.V.S., Dip. Bact. (Manchester), graduated at London, July 11th, 1951. Now of the A.R.C. Field Station, Compton, Berks.

The awards for the year 1952 will be announced in due course.

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SIR HENRY WELLCOME CENTENARY EXHIBITION

To mark the centenary of the birth of Sir Henry Wellcome on August 21st, 1853, a commemorative exhibition was opened at the Wellcome Foundation, Ltd., on Wednesday, July 8th, by Mr. Winthrop W. Aldrich, American Ambassador in London. This exhibition, which has been arranged and designed by the Wellcome Historical Medical Museum, covers the whole period of Sir Henry's long life (1853 to 1936). The exhibits range from interesting relics of his early days in the United States to sections on some of the world-famous research institutes which he established after he settled in Great Britain: the Wellcome Physiological Research Laboratories, Wellcome Chemical Research Laboratories, Wellcome Research Institution, Wellcome Museum of Medical Science, and Wellcome Historical Medical Museum and Library. It also deals with Sir Henry's archaeological expeditions to the Sudan and Palestine.

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LEGAL NOTES

Fowls Starved to Death.—A fine of £10 was imposed by Norwich magistrates on William Edward Crotch, a dealer, of 32, Afghan Place, Norwich, for causing unnecessary suffering to 33 fowls by omitting to provide them with proper care and attention. He was ordered to pay £5 costs. Crotch, who did not appear, wrote asking the court to be "as lenient as possible." Mr. James S. Hipwell prosecuted for the R.S.P.C.A.

Chief Inspector John McCluskey, R.S.P.C.A., said an inspection of a shed at defendant's premises revealed nine dead 10-week-old chickens, seven dead one-week-old chickens and seven dead ducklings. Live chickens were also in the shed. There was water but no sign of any food.

When questioned about the matter, Crotch had said he ought never to have bought the birds.

Mr. Roger Sandercock, veterinary surgeon, said starvation was the primary cause of the birds dying. *Post-mortem* examination of some of them showed that their crops were empty.

Inspector McCluskey reported that in 1944 Crotch was fined £5 for permitting a pony to be worked in an unfit state and on the same date was fined £2 for causing unnecessary suffering to chickens.

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Swans' Nest Set on Fire.—Five boys, whose ages ranged from 10 to 13, admitted at a Salisbury juvenile court that they had set fire to a swans' nest and had caused unnecessary suffering to a swan. They also admitted stealing two eggs.

A Chief Inspector of the R.S.P.C.A. said that he found a swans' nest well ablaze. He put the fire out. The female swan later went back on the nest, in which there were four eggs, but she sat only a short while because of the heat. Both swans were distressed and frightened.

The boys told the magistrates they were sorry. One boy who admitted firing the nest was conditionally discharged for a year and another was put on probation for two years and ordered to pay 4s. costs. Two of the others, who were considered not to have taken such an active part, were absolutely discharged on payment of 4s. costs, and the fifth boy, who had been in trouble twice before, was remanded for 28 days.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

ANTHRAX:

Cambs.—Home Farm, Longmeadow, Lode (July 1).
Ches.—Wash Lane Farm, Allostock, Knutsford (June 29).
Isle of Ely.—Church Farm, Wentworth, Ely (June 29).
Lancs.—Throstle Nest Farm, Preston (June 29).
Salop.—The Rough, Erway Farm, Dudleston, Ellesmere (June 30).
Sussex.—Montague Farm, Hankham, Pevensey (June 30).
Wilts.—Manor Farm, Monkton Farleigh, Bradford-on-Avon (July 1).
Worcs.—Home Farm, Powick, Worcester (June 30).

FOWL PEST:

Brecon.—Lower Porthgwyn Llanddew; Carregy Wen, Rhosferig, Builth Wells (July 1).
Carmarthen.—Llyn, Mynydd-y-Gareg, Kilwelly (June 30); Fron-deg, Tranismawr, and Ffosddu Llangynog, Carmarthen (July 2).
Ches.—Under Ridge House, Beacon Lane, and 106, Milner Road, Heswall, Wirral (June 30); Park View, Combermere, Whitchurch (July 2).
Cornwall.—Truthwell Farm, Marazion, Penzance (June 30).
Cumberland.—Post Office Row, Low Heskett, Carlisle (July 1).
Derby.—Lodge Farm, Morley (July 2).
Devon.—" Beverley," Launceston Road, Tavistock; Filleigh Barton, Lapsford, Crediton (June 30).
Dorset.—Sea View, Dorchester Road, Bridport (July 1).
Durham.—The Vicarage, Rookhope, Bishop Auckland (June 30); 23, Lowlands, Cookfield, Bishop Auckland; 16a, Flass Street, Durham; 6, The Leas, Darlington (July 2).
Essex.—21, South Avenue, Southend-on-Sea (July 1).
Flints.—Bramley Hall, Kinnerton, Chester; Gwelfor Dairy Farm, Bodlewyddan, Abergele (June 30).
Glamorgan.—148, Newton Nottage Road, Porthcawl; 12, Alma Road, Maesteg (July 1).
Glos.—Park Corner, Cirencester (June 29); Rodmore Farm, St. Briavels, Lydney (July 1).
Hereford.—Allotments at Green Lane, Hereford (July 1); Coppice Farm, Orleton, Ludlow (July 2).
Lancs.—27, Dawes Avenue, Birkdale, Southport; Big Brick Farm, Halsall, Ormskirk; 71, Segars Lane, Ainsdale, Southport; Kirklees Road, Tottington, Bury; Wolstenholme Fold Farm, Morden, Rochdale (July 1); 81, Easton Road, Droylsden, Manchester; 73, Aspley Lane, Moston; 27a, Weir Mill Cottages, Mossley, Manchester; 184, Fleetwood Road, Thornton, and Holmes Farm, Thornton, Blackpool (July 2).
Lincs.—The Pied Calf, Spalding; 3, Knights Street, Pinchbeck, Spalding; Hale Road, Great Hale, Sleaford (June 30); The Beeches, Gednay, Spalding; Sandhall Farm Cottage, and Rose Cottage, Crowle, Scunthorpe; 1, New Council Houses, Tallington, Stamford; 44, Council Holding, New Road, Sutton Bridge, and Queens Road Allotments, Fulney, Spalding (July 1); Bonsall Gate House, Blyton, Gainsborough; 43, Council Holding, New Road, Sutton Bridge; Dairy Farm, Worlaby, Brigg (July 2).
London.—6, Terrick Street, W.12.
Middx.—Wayside, Harmondsworth, West Drayton (July 2).
Monmouth.—Argoed Farm, Brynwyn, Raglan (July 1).
Montgomery.—Pantglas, Llanfair Caereinion, Welshpool (July 1).
Norfolk.—6, Eastholme, Hempton, Fakenham (June 29); Gibbitts Hill Farm, and Church Street, Martham, Gt. Yarmouth (July 2).
Northants.—Millcott, Glinton, Peterborough (July 1).
Salop.—The White House, Ightfield Heath, Whitchurch (July 2).
Somerset.—2, South View, Hewish, Bristol (July 1).
Suffolk.—10, Hall Pond Way, Felixstowe (June 30); 41, Britten Road, Lowestoft (July 2).
Sussex.—Hatch Farm, Liphook (June 29).
Warwicks.—47, Ansley Common, Nuneaton (June 30).
Yorks.—The Gables, Micklebring, Rotherham; West Laith, Heptonstall, Hebdon Bridge (June 29); 1, Whans Cragg Vale, Mytholmroyd, Halifax (July 1); The Mount, High Street, Brotherton (July 2).

SWINE FEVER:

Berks.—Picket Lot, Denford, Hungerford (June 30).
Cornwall.—Hendra Walls, Davidstow, Camelford (July 1); Hunters Lodge, Trevellas, St. Agnes (July 3); Wooton Farm, Landrake, Saltash (July 4).
Dorset.—Wheelers Lane, Knighton, Wimborne (July 1).
Essex.—Bryanstone Road, West Tilbury; Fen Farm, Elmstead, Colchester (June 30); Barvilles Farm, East Tilbury, Grays (July 2); Old Manorway Piggeries, Nr. Old Sewerage, Grays (July 3); 30, Crow Lane, and Battles Hall, Stapleford Abbots, Romford (July 4).
Glos.—17, Babdown Aerodrome Huts, Babdown, Tetbury (June 30).
Hunts.—Lords Farm, Yaxley Fen, Yaxley, Peterborough; Manor Farm, Bluntisham (July 2).
Isle of Ely.—Hillcroft Creek, March (July 2).
Kent.—Berry's Green Farm, Berry's Green, Biggin Hill, Westerham (July 1); Cordons, Ide Hill, Sevenoaks (July 4).
Lancs.—Premises off Bromley Street, Chadderton, Oldham (July 2).
Leics.—Ellistown Farm, Ellistown, Leicester (June 30); Highfields Farm, Church Street, Barrow-on-Soar, Loughborough (July 3).
Lincs.—Ebenezer House, Quadring Road, Donington, Spalding (June 30); The Garden, Church Street, Nettleham, Lincoln (July 1); Grange Farm, Brauncewell, Wellingore, Lincoln (July 2).
Monmouth.—Greenlands Farm, Pentwyn, Pontnewynydd (July 3).
Montgomery.—Wernddu, Llansantffraid (July 2).
Norfolk.—Great Dunham Hall, King's Lynn (June 30).
Northants.—The Green, Warmington, Peterborough (July 1).
Suffolk.—The Laurels, Stonham, Aspall, Stowmarket (July 1); Harts Garage, High Street, Walton, Felixstowe (July 2); College Farm, Aldeby, Beccles; Plantation House, Battisford, Stowmarket (July 3).
Sussex.—Wicks Wood Farm, Albourne Lane, Albourne (July 1).
Yorks.—Mowbray Hill, Well, Bedale (July 2); Grimston Grange, Grimston, Tadcaster (July 4).

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THE LORD MAYOR ON HORSEBACK

On Monday last the City was enlivened by the sight of the Lord Mayor, Sir Rupert De la Bère, M.P., in top hat and morning coat and wearing his badge of office, riding on a horse through the streets to his engagements as did many of his predecessors of long ago. He did this in some measure to pay honour to the Royal Canadian Mounted Police, who not only supplied the mount but provided an escort. Accompanied by Inspector Belec, who is in London in command of a detachment of the Mounted Police which attended the Coronation, the Lord Mayor rode from the Mansion House to Skinners' Hall in Dowgate Hill, off Cannon Street, to attend an engagement. The Lord Mayor is a past master of the Skinners' Company. He is also a farmer and a rider to hounds, so that to be mounted was nothing unusual for him. The Esquire in attendance was Colonel J. Hulme Taylor, the City Marshal, an old Bengal Lancer, who also rode in top hat and morning coat.

NEAR EASTERN ANIMAL HEALTH CONFERENCE

Reuter reports that a proposal to establish a foot-and-mouth disease commission for the Near East was on the agenda of the six-day conference on animal health recently held at Prodhromos, in central Cyprus. Delegates from Britain, Egypt, Persia, Iraq, Turkey, Pakistan, Afghanistan, Ethiopia, the Lebanon, Jordan, Saudi Arabia, the Yemen and Libya attended the conference, which was organised by the United Nations Food and Agriculture Organisation. The object of the conference was to discuss the possibility of co-ordinating the activities of these countries in stock-breeding, especially in the field of animal diseases.

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BRITISH COUNCIL AGRICULTURAL COURSE

The advances, of considerable importance to agriculture, which have been made in the field of mineral nutrition of animals, were demonstrated to overseas experts during a course on "Mineral Nutrition of Farm Animals" arranged by the British Council at Aberdeen from June 29th to July 11th. The course, which was directed by Dr. D. P. Cuthbertson and Mr. D. N. McArthur, Directors respectively of the Rowett and Macaulay Research Institutes, was attended by 15 members, including Colonial agricultural service Veterinary Officers from Jamaica, Kenya and Malaya, and other experts from Australia, Austria, Belgium, Denmark, France, Israel, Italy, the Netherlands and Norway. A number of British agricultural scientists also took part.

Lectures were given by members of the staff of the two institutes, with assistance from the Animal Diseases Research Association, Moredun Institute, Edinburgh, and the Department of Agriculture, King's College, Newcastle upon Tyne. Sir James Scott Watson, Chief Scientific and Agricultural Adviser to the Ministry of Agriculture, addressed the concluding session on "Science and Craftsmanship in Animal Production." Visits to farms had also been arranged.

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SWINE FEVER: 1,773 OUTBREAKS IN SIX MONTHS

In the first six months of this year there have been 1,773 outbreaks of swine fever, more than in any whole year since 1940, when there were 5,019. Since the war the highest number in a year was 1,343 in 1951. In the week ended July 3rd 45 cases were confirmed in 25 counties compared with 57 cases the previous week.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

SHOULD THE NAME "OEDEMA DISEASE" BE CHANGED TO "ENTERO-TOXAEMIA" OF SWINE?

Sir,—The recognition by Shanks, Lamont, Timoney and others of a disease in swine usually associated with the presence of oedema in some part of the body gave rise to the names "oedema disease," "gut oedema" and "bowel oedema." This was quite natural when the true nature of the disease was still in doubt. In fact the designation "oedema disease" had value in focusing the attention of practitioners upon an easily recognisable symptom or lesion, so that within a few years the condition has been reported from many countries.

For two main reasons, I believe that now the name "entero-toxaemia" should be substituted for "oedema disease," "gut oedema," etc. First, that the history of outbreaks, symptoms and lesions all strongly suggest a primary entero-toxaemia, the oedema being one manifestation of the toxaemia. This is supported by the fact that in some outbreaks oedema is not present, although every other symptom of an entero-toxaemia is clearly defined. Where several animals have died, at *post-mortem* examination one may find no oedema present in the first animal examined, marked oedema in the second and third and only a small patch of oedema, easily overlooked, in the gastric submucosa of the fourth. In other outbreaks extensive oedema may be present in every animal examined. Oedema is not as constant a symptom or lesion as inco-ordination, and paresis, paralysis and severe dyspnoea in those cases which terminate fatally. The experiments of Timoney in reproducing the disease by the use of filtrates obtained from the bowel contents of fatal cases of oedema disease strongly support the view that the disease is essentially an entero-toxaemia. Second, diseases which for many years have been included under the names "stomach staggers," "auto-intoxication," "pig staggers," etc., which in most cases are genuine entero-toxaemias, are now immediately designated as oedema disease if, at *post-mortem* examination, oedema is discovered in any part of the carcase. This is most unfortunate and can only end in even greater confusion with regard to the real nature of these diseases. Oedema disease, especially in North America, is being hailed as a new disease, instead of one manifestation of an old and complex disease, *i.e.*, entero-toxaemia.—Yours faithfully, Frank W. Schofield, Head, Department of Pathology, Ontario, Veterinary College, Guelph, Ontario, Canada.

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VICTORIA VETERINARY BENEVOLENT FUND

Sir,—Some little time ago you had a note in *The Veterinary Record* suggesting that veterinary surgeons who gave their services gratis at horse shows, dog shows, gymkhanas, etc., should ask the committees concerned for a subscription to our Benevolent Fund.

I know from experience that when this is done the request is rarely refused, and I would appeal to all veterinary surgeons, now that the season is in full swing, to adopt the course suggested. If this were done on a large scale a really goodly sum would accrue which would be of immense benefit in alleviating the needs of our less fortunate brethren and their dependants.—Yours faithfully, J. J. Dunlop, *Hon. Secretary*, Victoria Veterinary Benevolent Fund, 10, Red Lion Square, London, W.C.1.

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SWINE FEVER (CRYSTAL VIOLET VACCINE)

Sir,—I have read with interest the "Questions in Parliament" reported in your issue of May 30th, from which we learn that considerable progress has been made in discussions between the British Veterinary Association and the National Farmers' Union, as a result of which it is hoped that a satisfactory plan will be devised to ensure the more extensive use of swine fever (crystal violet) vaccine.

To many of us who have noted comments in the newspapers and have been watching the trend of B.V.A. policy lately this piece of information comes as no surprise, but it seems extremely odd to me that the first intimation in *The Veterinary Record* that such discussions have been taking place should come in the form of an extract from *Hansard*. It seems probable that we would have heard nothing of this matter for some time to come if this particular question had not been asked in Parliament.

Two Divisions of the B.V.A.—the Eastern Counties and the Hertfordshire and Bedfordshire Veterinary Societies—have sent resolutions to B.V.A. headquarters deprecating the principle of standardising fees for crystal violet vaccinations and intimating that this is a matter best left to the veterinary surgeon and his client.

Geographically these two Divisions cover that part of the British Isles with the largest pig population, their areas actually containing one-fifth of the pigs in England and Wales. In other words, those veterinary surgeons who deal with *one-fifth* of the pig practice in this country have given a considered and definite opinion on the subject of swine fever vaccinations. It is probable that other Divisions less interested in this subject have not thought it necessary to forward any formal resolutions, but I have no doubt that the majority of practising veterinary surgeons will agree with the Eastern Counties and Hertfordshire and Bedfordshire views on the matter.

The officers of the B.V.A. must therefore have realised that practising members will not welcome a swine fever vaccination scheme, but in spite of this they have chosen to carry on discussions with the N.F.U. without prior reference to members of the B.V.A.

In due course, no doubt, we will be presented with a "plan" which the various Divisions will be expected to approve.

It would be premature to indulge in criticism of a plan before the details are made known, but from past experience I feel confident in hazarding a guess that this plan will be to the advantage financially of members of the N.F.U. and to the disadvantage financially of practising members of the B.V.A.

While we cannot comment on details of a plan as yet undisclosed, we can at any rate voice our disapproval of attempts to devise a vaccination scheme.

I am therefore taking this opportunity of asking the officers of the B.V.A. the following questions and I feel that members who are engaged in general practice, particularly those most interested in pig practice, are entitled to immediate replies.

1. On what grounds can the officers of the B.V.A. justify their action in agreeing to these discussions without reference to members, and especially in view of the resolutions put forward by the two Divisions mentioned above?

2. Are they satisfied that any plan will ensure the more extensive use of the vaccine, bearing in mind the fact that practitioners can do much to popularise the vaccine by propaganda among their clients and that they are more likely to do this if the matter of fees is left in their hands?

3. Why are they always, apparently, so easily convinced by the N.F.U. that the farmers in this country cannot afford, or are not willing to pay, proper fees for professional veterinary services?

4. Are they aware that the ordinary farmer, smallholder and pig-keeper are quite satisfied with the fees that most of us charge for swine fever vaccinations and regard these fees as the most reasonable form of insurance against the disease?

5. Do they consider that fees of 4s. or 5s. for small pigs and 7s. 6d. or 8s. for large pigs are unreasonable, bearing in mind the initial cost of the vaccine to us, the allowance for waste of vaccine, the allowances for breakages of syringes, breakages and loss of needles, wear and tear on protective clothing, the cost of cotton-wool swabs and spirit for skin sterilisation, and, of course, allowance for our professional time not only for carrying out the actual vaccinations but also for time taken in sterilisation of equipment before and after use?

6. Are they aware that such fees are negligible compared with the profit made per pig by the farmer, and that these fees are much less than any insurance premium to cover loss of pigs from the disease?

In actual fact the premium to insure a pig for £25 against loss from swine fever is approximately 30s. The insurance folk do not like the "risk" and no cover is given for loss of profit through emergency slaughter of healthy pigs which are not yet fully finished.

7. Are they agreed that in no circumstances (even if we refuse to operate a scheme) must the use of crystal violet vaccine be allowed to pass into hands other than those of the veterinary profession, in view of the disastrous results which may follow its misuse?

8. Has it occurred to them that the leaders of the N.F.U. do not hesitate to demand concessions from us, on account of our numerical smallness as a profession and apparent meekness, and that they would not attempt to ask concessions from, say, manufacturers of farm implements, as they know that those manufacturers would know exactly how to deal with them?

9. Do they agree that we, as members of the Royal College of Veterinary Surgeons, can do much to uphold the honour and dignity of the veterinary profession by exercising the rights of a profession to charge such reasonable and adequate fees as we think fit without reference to any other body?

The officers should be able to answer these questions quite simply and by so doing will make their outlook clear to those of us who have elected them to serve us.

We cannot go on with a policy of appeasement to the N.F.U. leaders, as they will not be satisfied with a swine fever scheme alone. If they get such a plan into full operation we will then have demands for a scheme for this and a scheme for that, and in time those who agree to operate the schemes will find themselves working to a scale of fees laid down by their clients. Our professional status—perhaps higher now than ever before—will be lowered, the right type of person will decline to enter the profession, incentive will be lost, and in due course the whole standard of veterinary services in this country will suffer.

Amateur diplomacy, smooth talk and hypocritical considerations of "the good of the country" and general weakness will get us nowhere in dealing with those bodies who wish to interfere in our affairs.

This letter has been prompted by reference to a porcine topic, and in conclusion I would like to quote from one of Kipling's less well known poems, "The Prodigal Son (Western Version)." The following lines will perhaps explain my own attitude in writing this letter and at the same time offer good advice as to policy to the officers of the B.V.A. which they may well follow in their dealings with such bodies as the National Farmers' Union, the Pharmaceutical Society and others:—

"The fatted calf is dressed for me,
But the husks have greater zest for me;
I think my pigs will be best for me,
So I'm off to the Yards afresh.

I never was very refined, you see
(And it weighs on my brother's mind, you see),
But there's no reproach among swine, d'you see
For being a bit of a swine.

So I was a mark for plunder at once,
And lost my cash (can you wonder?) at once,
But I didn't give up and knock under at once.
I worked in the Yards for a spell,
Where I spent my nights and my days with hogs,
And shared their milk and their maize with hogs,
Till, I guess, I have learned what pays with hogs
And—I have that knowledge to sell!

So back I go to my job again,
Not so easy to rob again,
Or quite so ready to sob again
On any neck that's around.
I'm leaving Pater. Good-bye to you!
God bless you Mater! I'll write to you. . . .
I wouldn't be impolite to you,
But, Brother, you *are* a hound!"

—Yours faithfully, F. G. Waddington, "Limuru," Thetford Road, Watton, Norfolk. *June 25th*, 1953.

[The questions which Mr. Waddington asks the officers were dealt with at the joint meeting of the Lincolnshire and Eastern Counties Divisions, held at Peterborough on July 7th, and again at the Council meeting of the Association held in London on July 9th.—*Editor.*]

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REFRESHER COURSES

Sir,—One hopes that one or more of the southern veterinary schools will now follow the excellent example of the Glasgow School and institute a brief "refresher course" for practitioners. The authorities could bear in mind that it might also serve as a "refresher course" for the staff.—Yours faithfully, Paul Crosfield, Chipping Norton, Oxon. *July 3rd*, 1953.

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THE PRACTITIONER AND HIS DRUGS

Sir,—Those correspondents who have commented on the proposal to form an Association of Veterinary Pharmacists may be interested to learn that we have now decided to postpone this project. Nevertheless, in order to dispel any misconceptions, I wish to clarify our motives in sponsoring this organisation.

We described ourselves as veterinary pharmacists in order to distinguish between those of us who try to cater for the chemical requirements of the agricultural industry and the majority of pharmacists who do not. The point is that we are a minority within our own profession, having interests and difficulties not shared by the urban chemist. For example, our trade and professional journals, whilst helping pharmacists to keep abreast of new developments, have tended to neglect the veterinary and agricultural aspects of pharmacy—hence our desire to facilitate the interchange of such information. Another consequence of our position is that a state can arise in which there is nobody with experience in this branch of pharmacy on the administrative bodies of the profession. This can cause lack of understanding between the pharmacist and his governing body, and this is what we had in mind in the objective "to promote the professional status and interests of veterinary pharmacists."

We pharmacists require no further authority to sell pharmaceuticals—whether for human or veterinary use. We have, of course, responsibilities, both legal and professional; but we cannot permit these to be assumed by another profession or by commercial undertakings. That this fundamental principle was being challenged in the sphere of veterinary pharmacy was, we thought, unnoticed by our profession as a whole, and so we took it on ourselves "to oppose such restrictive practices," etc. It is not that we wish to treat or diagnose animal diseases; on the contrary, we recognise the responsibility of the veterinary surgeon in this sphere. Nor do we desire to spoil the good relationship between the farmer and the veterinary surgeon: we are accustomed to working in harmony with members of related professions and that co-operation is generally regarded as being in the best interests of the patient. It was in that light that we proposed "to encourage liaison between veterinary surgeons and pharmacists."

There are other aspects peculiar to veterinary pharmacy which do not concern the veterinarian, such as the storage and handling of agricultural chemicals which is on a scale foreign to the urban retail chemist: the question of competition by animal medicine manufacturers who in some cases call themselves veterinary chemists and yet have no registered pharmacist on the company's board: the problem of exchanging views, since we are scattered and few. These and many other subjects were discussed by the sponsors of

the proposed association. That we wished to overcome obstacles such as these is not evidence that we are motivated by profit : it is inherent in human nature to strive to surmount obstacles. Granted that we dispense and supply drugs and chemicals for profit, yet that does not preclude a sense of responsibility or a pride in the work for which we have been trained. No one body or profession has a monopoly of good intentions, or of the necessity of making a living, and the legitimate interests of veterinary surgeons are not served by denying those of pharmacists.

These matters are, however, now receiving the attention of the established organisations of pharmacy, and we therefore hope that the formation of an independent association will prove to be unnecessary. The real problem with which the profession is faced is in determining the rôle which veterinary pharmacy is to take in assisting agriculture to help meet the increasing demands of a growing world population. In this there is surely some common level on which mutual understanding and co-operation can be achieved between veterinarian and pharmacist.—Yours faithfully, A. E. Moss, Runnymede, Wenlock Road, Shrewsbury. *July 6th*, 1953.

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A MEDICINE CHEST

Sir,—I trust your readers may be interested in the following practical suggestion for the construction of a medicine chest:—

Description Dimensions: 13 inches by 14 inches by 33 inches.
Construction: Of plywood and softwood. All major joints and drawers dovetailed.
Cost: £6.

Contents:—

Small Drawers

1. Neoinjector (milk fever apparatus) and flutter valve.
2. Small surgical instruments, suture needles and microscope slides.
3. Tablets and blocks of sulphonamide group.
4. Tuberculin, T.T. syringes and spares.
5. Bull rings, eye hooks, embryotomy wire, ethyl chloride spray.
6. Materials for bandaging, etc.
7. Antibiotics, hormones and vitamins.

Large Drawers

1. P.M. gloves (in pouch), talc, plaster of Paris, sterile sample bottles.
2. Miscellaneous drugs.

Top Racks

Back, Large bottles: Deficiency disease injections.
Lugol's iodine.
Sulphamezathine, 33% injection.
Sides: 8 oz. and 12 oz. medicine bottles for stock drugs.
Centre: Racks for miscellaneous items.
Front: Steriliser and cotton wool.

I have attempted to achieve some degree of grouping in the arrangement of drugs and although the above list is far from complete I think that it will serve to indicate the general layout. I usually carry the chest on the back seat of my car, as I prefer to have the use of a roof light, but it would fit into the boot of the average car. The only other thing that I carry inside the car is a small box for empties which serves as a palliative for my natural untidiness and as a reminder when restocking.

I have worked with this item of furniture for over eight months and have found it extremely useful, particularly the drawers. With the modern multiplicity of drugs it is obviously of considerable advantage to carry as large a stock as possible and to carry these expensive items in such a way that they do not become damaged if not used for a month or so.

Although the principle of the chest seems to me to be sound it could undoubtedly be improved upon. For example, if it were made of sheet aluminium the saving both in space and weight would be considerable. However, any such equipment would be fairly weighty when fully loaded. I think, too, that it would be a help to have the medicine bottles carried in removable wire crates: the central racks are unnecessarily complicated.

The most serious difficulty one encounters in having racks of any fixed dimensions is that the drug manufacturers continually alter the dimensions of their packs. It would be of great assistance if they could agree on a standard range of dimensions.—Yours faithfully, P. R. Greenough, Florida Cottage, Castle Cary, Somerset.

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RINGWORM IN THE SMALL DOMESTIC ANIMAL

Sir,—I am working with Dr. John Wood, of Johns Hopkins Hospital, on the problem of ringworm in the small domestic animal. We have had quite an enzootic of it in Baltimore the last one and a half years with many cases of transmission to the owner.

In several cases Dr. Wood has isolated a non-pigmented strain of *Microsporum canis* which, as he is a mycologist, is of great interest to him. We are trying to track down this non-pigmented strain. The owner of a French poodle kennel here in Baltimore and one who has had much trouble with ringworm, believes his troubles started with the importation of a fine poodle from England. Whether that be so or not is unimportant, as most of his stock has shown lesions during the past one and a half years.

We in Baltimore are extremely interested in knowing if you have seen much *M. canis* infection in dogs and whether any non-pigmented forms have been cultured by your laboratories.

If any of your members have trouble with this problem would they be so kind as to send suspected hairs to Dr. Jacqueline Walker, Mycological Reference Laboratory, London School of Hygiene and Tropical Medicine, University of London, Keppel Street, London, W.C.1, and mention to her to keep Dr. John Wood, of Hopkins Hospital, posted of non-pigmented forms.—Yours faithfully, Norman Herbert, 2908, Wynham Road, Baltimore 16, Maryland. *June 23rd*, 1953.

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FAECAL EXAMINATIONS IN THE DOG

Sir,—The article "Report on Faecal Examinations in the Dog," by Mr. Vaughan, M.R.C.V.S. (*The Veterinary Record*. 65. No. 25.) brought to my mind a case of *Trichuris vulpis* infestation which, despite the fact that this parasite is generally regarded as being of little significance, was sufficiently heavy as to result in the ultimate destruction of the animal.

The subject was a young springer spaniel bitch which first called attention to itself by exhibiting obstinate diarrhoea and attacks of hysteria.

Faecal examination showed an abundance of mucus in which were found numerous *Trichuris vulpis* ova, a few *Toxacara canis* ova, pus cells and red blood cells. Further examinations of the faeces throughout the treatment showed many trichuris ova present at all times. Concentration methods were not necessary. At no time were adult worms other than the ascarids found in gross observation.

Without going into full details, let it suffice to say that despite our efforts the condition of the animal slowly deteriorated and the bitch was destroyed in order to avoid further suffering.

An autopsy was performed and the caecum, entire colon and rectum were found to be packed with a loosely tangled mass of *Trichuris vulpis* firmly anchored to the mucosa.

Incidentally, I noticed that Mr. Vaughan described only a flotation method used in his examinations. As the operculates are less buoyant than other eggs, concentration by sedimentation is usually recommended. In the case to which I refer a flotation technique was used on one occasion in order to check up on the ascarids after treatment and no trichuris ova were seen, although many were present in simple smears from the same sample.

I do not know the incidence of this parasite in the United Kingdom. It is certainly rare. Examinations of dogs' faeces for parasites alone

average 495 per year in this department and I have encountered only the one case in five years. I should have expected it to be of greater incidence, even if of little significance, in the warmer climates.—Yours faithfully, A. T. Hose, Department of Pathology, P.D.S.A. Sanatorium, Woodford Bridge Road, Ilford, Essex. *June 30th*, 1953.

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VETERINARY SURGEONS AND NATIONAL SERVICE

Sir,—With very little warning, veterinary students completing their studies this summer have been told they are to be called up for National Service. Previously deferment has been allowed those who went into agricultural practice.

This change of policy will have an important effect on the plans of those of us, engaged in this type of practice, who were relying on the assistance of these men. The advertisement columns of *The Veterinary Record* indicate how greatly they are needed.

It seems very unfair that they should have been given so little notice that they are to be called up. It may well be that this will cause hardship in some cases. One of them, known to the writer, is married and has a widowed mother. Such a person is surely entitled to adequate warning in order to arrange for the well-being of his dependants.

The students were required to decide whether they wished to serve in the R.A.V.C. or another arm of the service. They were given the opportunity of applying for a commission in the R.A.V.C. which involved a longer period of service. They were given very little time to consider this and would not be able fully to consult their parents or extra-mural teachers. They were asked to make the decision when they were about to take their final examination. It is well known that on these occasions a student is under very great mental stress. This added anxiety may well affect his examination performance. It does seem to be very unfair treatment.

It seems rather absurd to train qualified veterinary surgeons in the ranks of the R.A.V.C. It is difficult to imagine the same thing occurring in the case of the R.A.M.C. In the event of a future emergency these men will be found to be engaged in practice or other work of national importance and will not be available for military service. The R.A.V.C. or other arm which has trained them will suffer the loss of their trained personnel. One of the main objects of National Service will have been defeated and the public money spent on their training will have been wasted

The decision to call up our recent graduates will bring great problems to the profession. There seems to be little to justify it and much to condemn it. It is to be hoped that it will be reversed as soon as possible.

No one need be ashamed of the record of the veterinary profession in a national emergency. In the last war as many as were able joined the forces. The others worked magnificently at home under the most trying conditions. We do not wish to avoid our national duty. We just ask to be treated fairly and reasonably.—Yours faithfully, J. H. McGhee, 46, Coten End, Warwick. *June 27th*, 1953.

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Sir,—It was with great concern that I read the announcement of the Ministry of Labour and National Service published in your issue of June 20th under the title "Veterinary Students and National Service." I would draw your attention to paragraph 4, and in particular to the statement "the number of National Service Commissions in the R.A.V.C. available in 1953 will, however, be less than the number of veterinary students liable to be called up."

I am not suggesting that veterinary surgeons (as *qualified* men they will be—not students) have a divine right to exemption from National Service, but is it in the interests of the country and the profession to call up those in excess of the requirements for commissioned rank?

The purpose of conscription is to have a ready army of men, trained to a standard, so that in the event of war they will be ready for immediate recall, and ready for action with the minimum of training. How does the veterinary surgeon fit into this picture? In a time of war he either :—

(*a*) Enters the Army as a commissioned officer to do the work for which he is trained, or

(*b*) He stays at home doing an equally vital job looking after the nation's food supply.

There are not all that many veterinary surgeons that there will be an excess for either job, so the number available for other arms would be virtually nil.

I take the Ministry's statement to mean that a veterinary surgeon who wishes to serve in the R.A.V.C., and because of a full strength of officers cannot obtain a commission, must become a private soldier and spend his time engaged in general duties. He may even rise to non-commissioned rank, but will he be allowed to practise his art? I doubt it very much, and even if he were should the profession stand for it? I doubt if even in the Army it is considered that the general duties of a private in peace-time bear any relation to the duties of a veterinary surgeon in war. Would not two years in the Ministry of Agriculture in lieu of National Service be of much more use?

Thus for the sake of a narrow-minded, bureaucratic principle, a man who has spent five years at a university and has been adjudged fit to become a Member of the Royal College of Veterinary Surgeons, will be required to spend two years wasting his time and that of his country engaged in some menial task. This, to my mind, is the biggest insult a profession could be given. At a time when the veterinary profession is fighting for its rightful place and seeking greater recognition in this country, it is surely a matter for the Royal College and the B.V.A. to take up with the utmost speed and vigour. I can imagine the reaction of the B.M.A. if a qualified doctor was called up as a medical orderly.

This is a matter of some urgency as the first veterinary surgeons affected are due for service in two weeks' time.

To avoid any misunderstanding I would say I have completed my National Service.—Yours faithfully, R. H. Mears, 5, Providence Place, Pyrford, Woking, Surrey. *June 21st*, 1953.

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(1) LOSS OF TEATS IN NEWLY BORN PIGLETS ; (2) REDWATER IN CATTLE

Sir,—(1) I would like to describe a condition which I have met in piglets in the hope that my colleagues may have some opinions to offer.

The condition has occurred in a herd of Large Black pedigree pigs and has only been noticed this year. Within two days of birth the front one and sometimes two pairs of teats become hard with a white ring around the base. In a few days the teats are completely hard and either fall or are rubbed off, to leave a healed area. Later, if the pigs are examined there is no evidence to show that there were ever any teats there before and one would presume that the pig was born deficient of the teats. The pig shows no sign of ill-health nor are there any other lesions. The majority of the sows were farrowed in concrete sties with a lamp, and within a few days were turned out. The condition was also seen in a litter which had been farrowed in a sty of wood, scrubbed clean. Most of the sows are related to one another but this condition was also seen in a bought-in sow's litter which farrowed on the farm. I understand that it has been seen in other herds.

Fusiformis infection has been suggested and I am trying penicillin therapy and will later, should this prove useless, try sulphamezathine. This loss of teats is a serious condition to a breeder, and I would be very grateful for any information which could be given.

(2) Recently, I have encountered an outbreak of piroplasmosis, the source of infection of which I find most baffling.

The outbreak involved a herd of steers and heifers about 15 months old. Some of the cattle were born on the farm but most were bought-in from various sales at two weeks of age or younger. They were raised on the farm and then turned out in April in a large park. About the end of May three animals were taken ill within a week and died within 24 hours. The symptoms were acute anaemia, weakness, some blood-stained urine, constipation and prostration. No rise in temperature was recorded. About the same time a calf of eight months old on the farm some miles away from the park died under identical conditions. At the end of June two more of the older animals were taken ill and one was examined at Weybridge, piroplasmosis being reported.

The peculiar points of interest are :—

1. There has never been a case of redwater within the memory of anyone on the farm, nor is it considered a redwater area.
2. Neither I nor any stockman could find any ticks on the animals.
3. Two animals treated with "Piroparv" showed no response.
4. The death of the eight-month-old calf complicates the picture.
5. The usual symptoms seen in our redwater areas are a high temperature, diarrhoea and coffee-coloured urine (the urine of these animals was red) ; there is a good response to "Piroparv" ; normally the condition is seen in dairy cattle.

The animals were in quite good condition except for two which died, which were poor. Is it possible for an animal to pick up infection in the early days of life and suffer a breakdown later? Unless this is the answer I cannot see how the animals became infected on the farm. There is the possibility that the condition was chronic and that the symptoms were seen only when the animals were so weakened that they were away from the herd. This would account for the lack of response to therapy but would not be in line with the usual course of the disease which is usually acute. I would value any opinions on this report.—Yours faithfully, J. B. Tutt, 1, St. Cross Road, Winchester. *July 3rd*, 1953.

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Advertiser's Announcement

Dapsetyn : Introduction

Dapsetyn, an intramammary injection for the treatment of acute mastitis, particularly summer mastitis in bovines, has been introduced.

Dapsetyn is supplied in boxes of 12 tubes of 8 g., each tube containing Alficetyn Brand of chloramphenicol B.P. 0·15 g and Dapsone 0·3 g.